SERVICE MANUAL

A-7300/2T

GENERAL DESCRIPTION

TEAC'S A-7300 and A-7300 2T are high quality stereo tape decks, representing a New Generation in the design and construction of recording equipment. With AC reel motors and Direct-Drive Servo-controlled DC Motor-Capstan, all controlled by Integrated Circuit (IC) Logic Circuitry, these decks provide highly reliable operation at greatly reduced noise and heat levels. With almost all relays replaced by Logic Circuits, transport control is quick and positive and governed by 6 calculator-like buttons on the control center. Advanced electronics are also utilized.

This manual is the final version and supersedes previous provisional manual.

TEAC®

PRODUCT OF JAPAN

SPECIFICATIONS

MECHANICAL

Tracks:	A-7300	4 track 2 channel stereophonic 4 track 2 channel monophonic 4 track 1 channel monophonic
	A-7300 2T	2 track 2 channel stereophonic 2 track 2 channel monophonic 2 track 1 channel monophonic
Heads:		Erase ×1, Rec ×1, Playback ×1
Reel Size:		10-1/2" maximum NAB reel
Tape Speeds:		A-7300.....7-1/2 ips & 3-3/4 ips A-7300 2T..15 ips & 7-1/2 ips
Motors:		Direct drive DC servo capstan motors ×1 6-pole eddy-current induction motors for reel drive ×2
Wow & Flutter:		0.05 % at 15 ips (W-RMS) 0.06 % at 7-1/2 ips (W-RMS) 0.10 % at 3-3/4 ips (W-RMS) Wow and flutter measured according to weighted (W-RMS) NAB standard using TEAC YTT-2004/2003/2002 flutter-free tape. Above value is measured during playback.
Fast Winding Time:		Approx. 150 seconds or less with 1800 ft tape
Power Requirement:		117 V 60 Hz 80 W
Weight:		62 lbs (28 Kg) net
Dimensions:		21-5/8" (H) 17-3/8" (W) 9-3/4" (D) 548 (H)×440 (W)×246 (D) mm

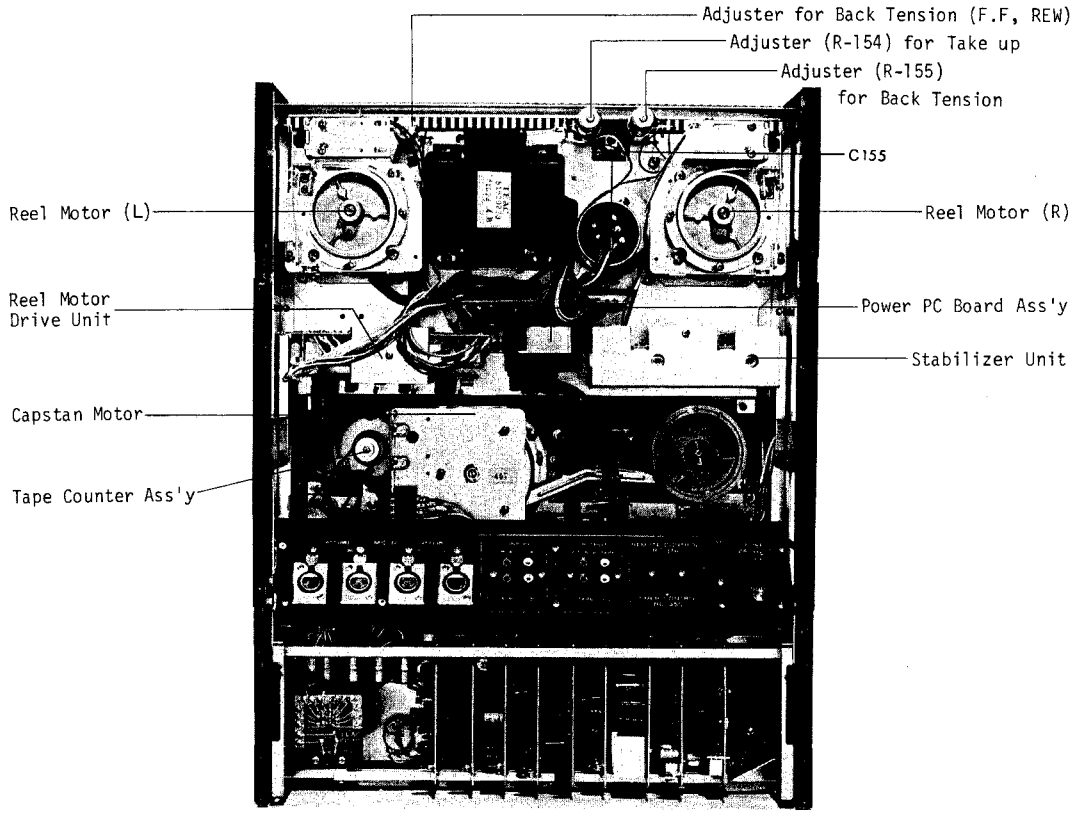
ELECTRICAL

0 dB = 0.775 V

Frequency Response: (Measured at 20 dB below the Spesified level)
Refer to page 11,12,13 Freq. Response Limits chart

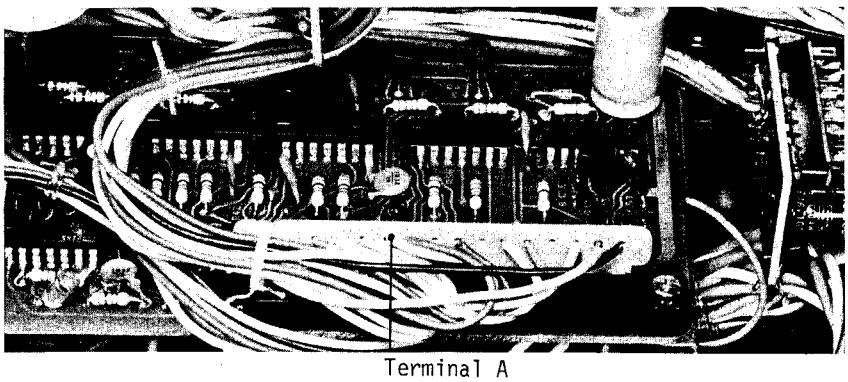
Input Impedance:	LINE:	50 KΩ or more
	MIC:	600Ω (balanced)
Output Load Imp:	LINE OUT:	10 KΩ or more
	HEADPHONE:	8Ω
Equalization: (Playback)	A-7300	7-1/2 ips...50μS & 3180μS 3-3/4 ips...90μS & 3180μS
	A-7300 2T	15 ips.....50μS & 3180μS 7-1/2 ips...50μS & 3180μS
Output Level:	OUTPUT:	0 dB +6 dB ±1 dB (max.)
	HEADPHONE:	-17 dB -11 dB ±2 dB (max.)
Input Level:	LINE:	-8 dB -18 dB ±2 dB(min.)
	MIC:	-48 dB -58 dB ±2 dB(min.) with ATT (dB) 0 (back panel) -38 dB ±3 dB (min.) with ATT (dB) 20 (Back panel)
Bias Frequency:		100 KHz (±5 KHz: Push-pull Oscillator)
Crosstalk Rejection:		40 dB or more, adjacent track at 1 KHz
Channel Separation:		45 dB (4T, 2T) or more, channel to channel at 1 KHz
Erasure:		68 dB (4T), 65 dB (2T) or more
Signal-To-Noise Ratio: (playback)		Better than 53 dB at 15 ips Better than 52 dB at 7-1/2 ips Better than 48 dB at 3-3 4 ips

TAPE TRANSPORT PARTS LOCATION



-REAR VIEW-

Fig. 1-1 Tape Transport Parts Location



Terminal A

Fig. 1-2 Control PC Board

MEASUREMENT AND ADJUSTMENT
-MECHANICAL-

The TEAC A-7300 uses highly reliable AC Motors for both reel motors, and a DC direct-drive capstan system. It should require a minimum of mechanical maintenance or adjustment. These adjustments are made at the factory. Readjustments should only be required after long periods of operation or following component replacement.

ADJUSTMENT OF D.C. [on the STABILIZER UNIT]

NOTE : To prevent damage to the motor and control circuitry:
1. Remove terminal A from the Control PC board. See Fig. 1-2.
2. Disconnect the 11 pin connector from the motor (Connector Block).

Adjustment Procedure
1. Remove the rear panel.
2. Remove terminal A, and 11 pin connector.
3. Place the POWER switch to "ON".
4. Connect a VOM or VTVM across the 24V Test Point (Red Lead Socket) and chassis Ground.
5. Adjust VR21 if needed to obtain 24V ± 0.5V DC.
6. Adjust VR-22 for 5V ± 0.25V DC output at 5V test point (Pink Lead socket).

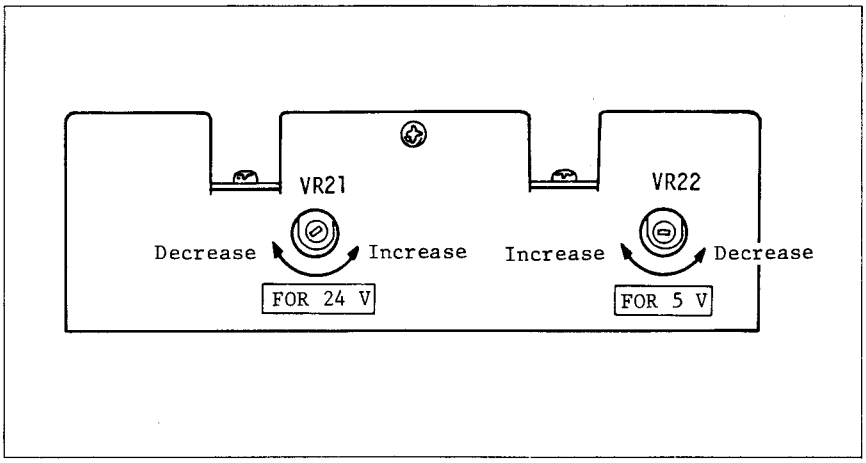


Fig. 2 Adjustment Locations

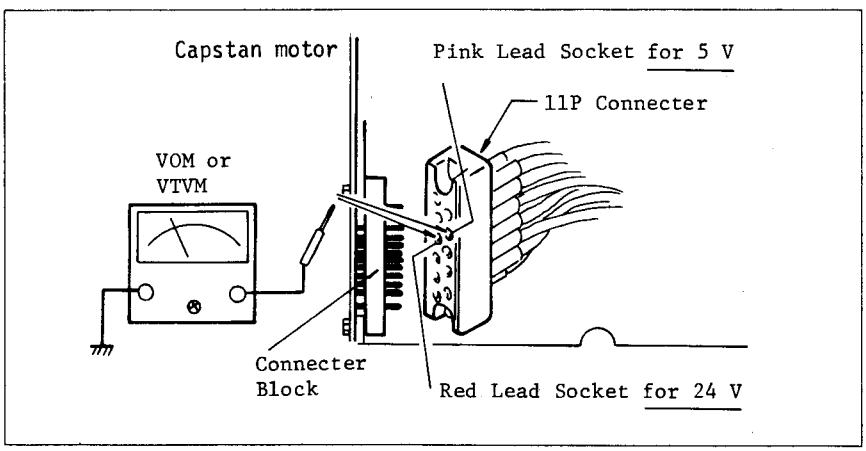


Fig. 3 Test Points

CAPSTAN SHAFT TOLERANCE ADJUSTMENT

1. Check that the capstan motor moves freely without binding on the Thrustplate.
2. Check that the clearance between the motor shaft tip and the Thrustplate is between 0.1 and 0.3 millimeter.
3. To adjust, first loosen the locking nut; then set with a common screwdriver for approx. 0.2mm clearance. Check by observing the capstan movement.
4. Tighten the Lock Nut and secure with locking paint.

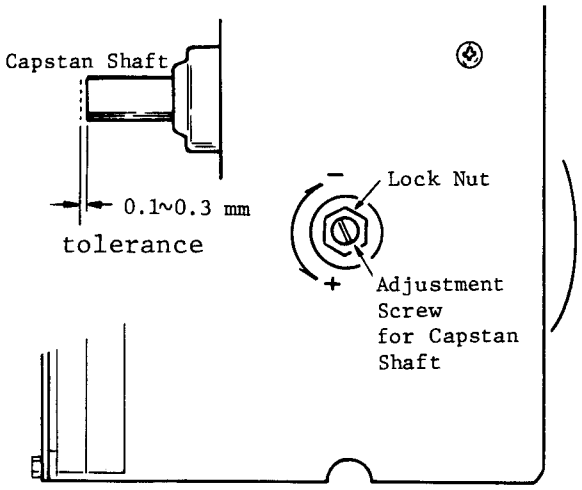


Fig. 4 Shaft Tolerance Adj. Location

TAPE SPEED ADJUSTMENT

Place the PITCH CONT to the OFF position. The tape speed should be measured using TEAC flutter free tape, Model YTT-2004 (15 ips), YTT-2003 (7-1/2 ips), YTT-2002 (3-3/4 ips).
These tapes contain a highly accurate 3000 Hz tone. Connect a digital frequency counter to either line OUTPUT jack.
The indicated frequency should be 3000 Hz (±10 Hz or less) for both speeds. If necessary, adjust "adjustable resistors" on the CAPSTAN MOTOR.

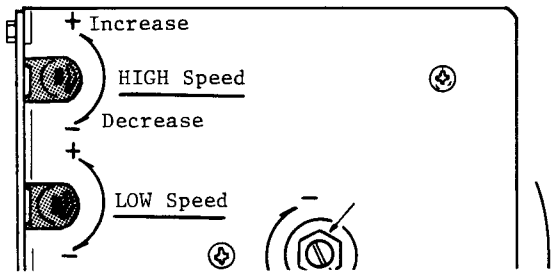


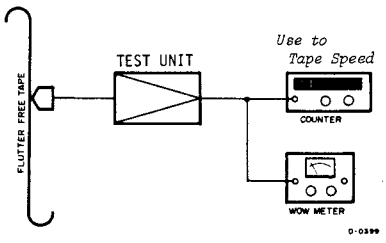
Fig. 5 Tape Speed Adjusters

FLUTTER

Flutter should be measured in Playback mode using a TEAC flutter-free tape YTT-2004 (15ips), YTT-2003 (7-1/2ips), 2002 (3-3/4ips) and Meguro model MK665B flutter meter. Measurement of flutter should be made accordance with NAB standards. Values obtained with different standards of euipment cannot be compared.

Flutter should not exceed.	15ips :	0.10% (RMS)	0.05% (W-RMS)
	7-1/2ips:	0.12% (RMS)	0.06% (W-RMS)
	3-3/4ips:	0.15% (RMS)	0.10% (W-RMS)

These figures apply to any tape position and direction (such as full take-up reel, full supply reel or about mid-point).
If there is excessive wow and flutter, examine the pinch roller, motors, capstan shaft, and reel rest for "grease", "oil", "dirt" and/or "wear". Also examine the tape counter assy for evenness of operation.



Test Equipment Set-up

PINCH ROLLER PRESSURE

NOTE: Pinch roller pressure is supplied by the pinch roller solenoid arm and it is most important that the solenoid plungers be fully bottomed before taking pressure measurement.

1. Load tape or block the shut-off arm in the "ON" position. Remove the Pinch Roller Cap.
2. Attach a suitable spring scale to a screw inserted in the pinch roller shaft.
3. Place the unit in the PLAY mode (▶), and holding the spring scale as illustrated, slowly draw it away from the pinch roller.
   (Do not allow the string to rub against the pinch roller.)
4. Note the reading on the spring scale at the instant the pinch roller stops rotating.
5. The scale should indicate 2 kg ± 200 g for 2T (1.8 kg ± 200 g for 4T).
6. If adjustment is necessary, loosen the 3 mounting screws on the capstan solenoids and position the solenoids for optimum pressure.

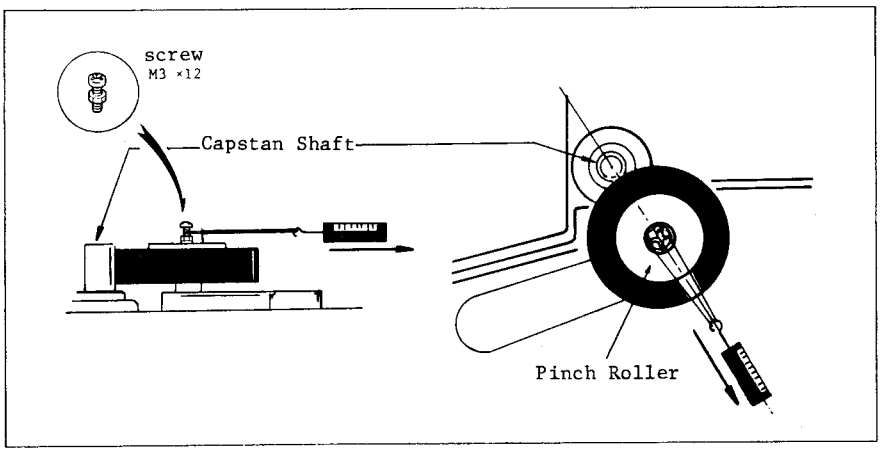


Fig. 6 Pressure Measurement

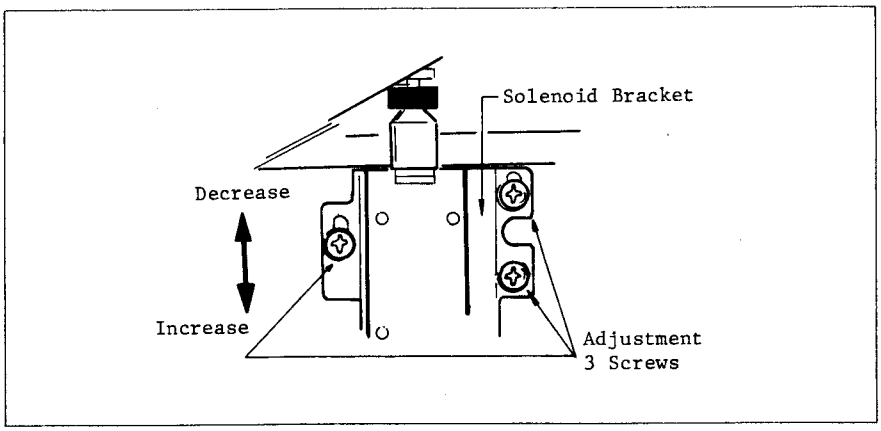


Fig. 7 Adjustment Location

TORQUE MEASUREMENT PROCEDURE

All Torque and Tension Measurement must be made with the automatic shut-off switch (right tension arm) blocked to the "ON" position.

BACK TENSION:

1. Place the REEL size switch to the LARGE position.
2. Block the shut-off arm in the "ON" position.
3. Install an empty 7" reel (TEAC RE-702) on the left reel table.
4. Rotate the reel and wind several turns of string counter-clockwise around the hub. Attach spring scale to string.
5. Place the unit in the (▶) play mode.
6. Pull the scale away from the reel against the motor torque with a steady smooth motion.
7. Note the scale reading while it is in steady motion. (The string must not rub the reel flanges.)
8. Adjust R-155 as needed to obtain tension of 450 ± 20 (g-cm). (calculated value using T = R × W)
9. Repeat all the above for the REEL-SMALL position. Reading should be 300 (g-cm).

TAKE-UP TORQUE:

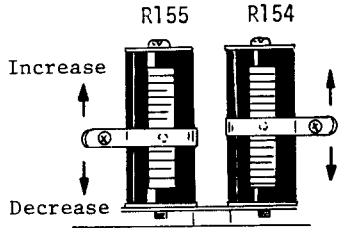
1. Place the REEL size switch to the LARGE position, with empty reel and attached spring scale on the right reel table.
2. Place the unit in the (▶) play mode.
3. Allow the rotation of the reel to slowly draw the scale toward the hub.
4. Hold the spring scale with enough force to allow a steady reading.
5. It should be approx. 550 ± 20 (g-cm). If adjustment is necessary, slide the band on R-154. (The same resistor is also used for SMALL REELS).

NOTE

To measure torque when using a reel with a hub radius of other than 3.0cm refer to following table;

FORMULA FOR TORQUE CALCULATION:

T (g-cm)= R × W
R: radius of hub (cm)
W: gram



SPECIFICATIONS

	TAKEUP TORQUE	BACK TENSION
PLAY-LARGE	550 ±20 g-cm	450±20 g-cm
PLAY-SMALL	350 g-cm	300 g-cm
FF/REW LARGE	1.9 Kg-cm	120 g-cm
FF/REW SMALL	1.6 Kg-cm	80 g-cm

Fig. 8 Torque Adj. Location

HEAD ALIGNMENT

HEAD ASSEMBLY (head cluster) is adjusted to very close tolerance at the factory and normally requires only minor alignments or adjustments after replacement on the deck. Complete readjustment of the HEAD ASSEMBLY will be necessary when an individual head is replaced.

HEIGHT ADJUSTMENT (4 track)

RECORD HEAD: The record head pole should be above the edge of a threaded tape by the width of a thin pencil line.

PLAYBACK HEAD (FORWARD): The forward playback head pole should be even with the top of a threaded tape.

PLAYBACK HEAD (REVERSE): The pole of the reverse head should be even with the bottom of a threaded tape.

ERASE HEAD: Erase section should be a heavy pencil line above.

NOTE

A-7300 **2** track RECORD and ERASE heads are centered on the tape. PLAYBACK head forward section is a heavy pencil line above the edge. Refer to the illustration below.

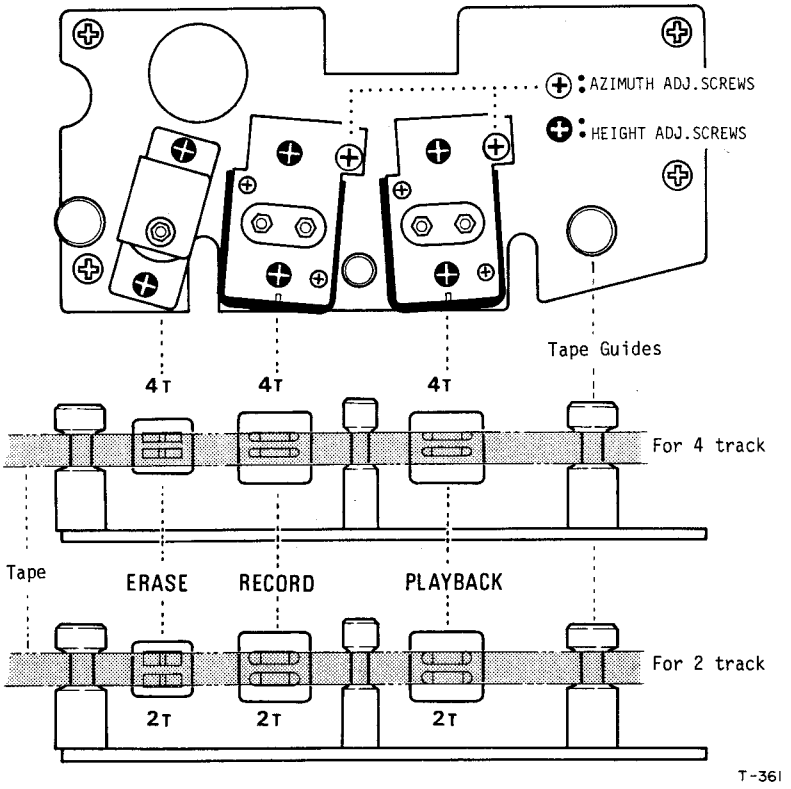


Fig. 9 Head Configuration and Alignment Screws

HEAD ASSEMBLY REMOVAL AND REPLACEMENT

1. Remove power from the unit.
2. Move head assembly cover by removing 2 screws on the left and right end of the head cover and then gently move cover toward the top of the deck.
3. Remove 4 mounting screws from the head assembly.
4. Lift head assembly and remove the 2 pin jacks and the 9 pin connector mounted on the rear of the head housing.
5. Lift off head assembly.
6. Loosen 2 counter-sunk screws (A) from the rear plate of the head assembly and remove 2 small screws (B) from the top of the head. Then slide off the shield case (C).
7. To replace a single head, a nut driver is required. Remove the 2 nuts (D) on the defective head through the access hole provided. This releases the head from the mounting plate.

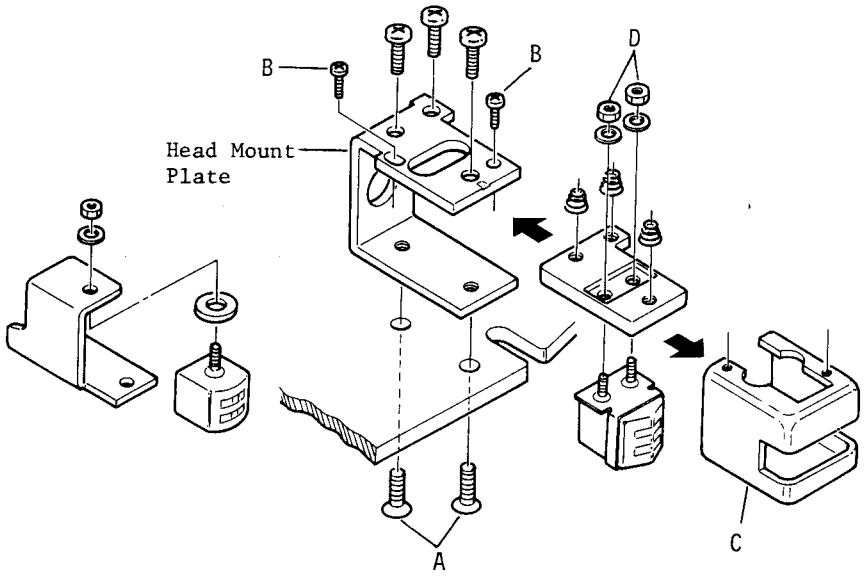


Fig. 10 Head Replacement

After the head is replaced be sure to replace the shield case and tighten the 2 counter-sunk screws on the rear of the head assembly plate. Also insure that the spring on the head assembly cover is properly set in the slot on the head cover bracket. (Ref. to Parts List).

-FEATURE COMPARISON CHART-

	A-7300	A-7300 2T
Heads	4T 2 ch	2T 2ch
Speed	7-1/2, 3-3/4 ips	15, 7-1/2 ips
Special Features	Uniform Wind	Edit function
	Index counter	Linear Counter
	No memory Rewind	Memory Rewind

ADJUSTMENT LOCATIONS

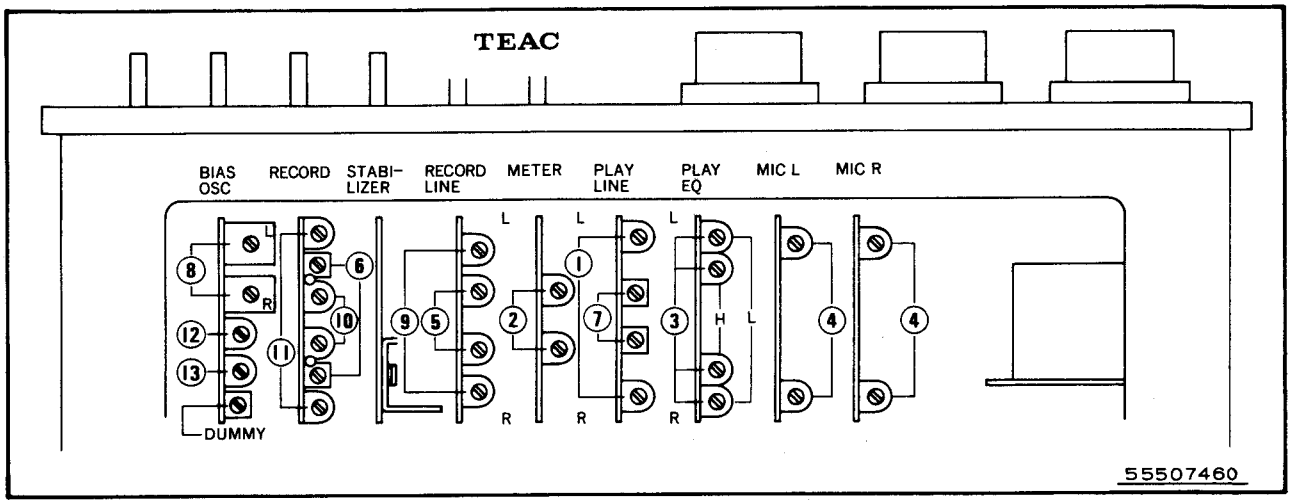
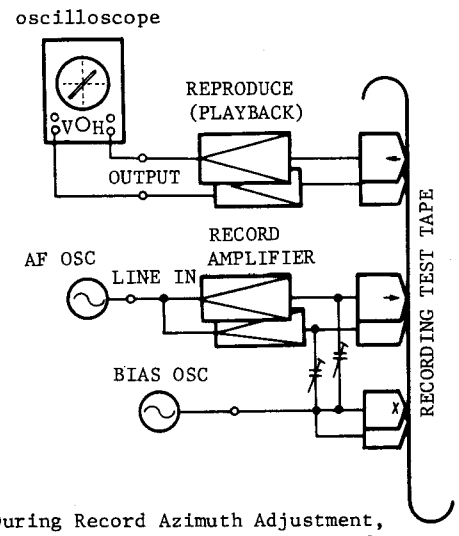


Fig.10 Ampl PC Board Locations and Adjustment Points

NOTE: All Internal adjustments are accessible by removing bottom cover.
Ref. Nos correspond to ref. Nos on ELECTRICAL ADJUSTMENT Procedure Charts on the next page.



During Record Azimuth Adjustment, the oscilloscope pattern angle for SOURCE and TAPE monitoring must be identical in order to maintain a 0° phase difference between them.

Fig.11 Head Alignment Fine Adjustment Set-Up

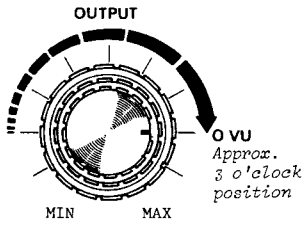


Fig.12 Specified Output Level Position

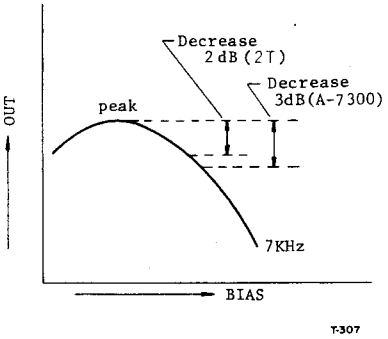


Fig.13 Bias Limits Chart

ELECTRICAL ADJUSTMENTS

Ref. Nos.	ITEM	SIGNAL SOURCE	MEASUREMENT CONNECTION	MODE	ADJUSTING POINT (on P.C.B.)	INSTRUCTIONS
	Playback Head Adjustment	TEAC Test Tape YTT-1003 15KHz Test Tone	VTVM & Oscilloscope to OUTPUT jacks	TAPE (playback)	Play Azimuth Screw on Head Assy'	1. Tape SPEED at LOW. 2. Adjust for maximum indication. 3. Less than 45° out of phase at oscilloscope.
①	*Specified Output Level Setting*	400 Hz 0 dB Test Tone	VTVM to OUTPUT jack	TAPE	VR-251 VR-252 on Play Line	1. OUTPUT control at the 0 VU position 2. Adjust for 0 dB at OUTPUT jack. (This is the specified output level.)
②	*VU meter Calibration*				VR-301 VR-302 on Meter	1. METER switch to NORMAL for 0 VU, HIGH for −3 ±0.5 VU Reading on the VU meter lower scale.
③	*Frequency Response*	TEAC Test Tape YTT-1004			VR-203 (HIGH) VR-204 on Play Eq	1. Compare the readings obtained on the VTVM with response Limits given in Fig. 14
		YTT-1003			VR-201 (LOW) VR-202 on Play Eq	
④	*Monitor Level Setting*	400 Hz −18 dB (97mV)	AF Oscillator to LINE IN jacks	SOURCE	VR-401 VR-402 on Mic L, R	1. Adjust to obtain the specified output level of 0 dB at OUTPUT jacks. 2. input selector → LINE
⑤	*VU meter Level Set*	400 Hz 0 dB (775mV)			VR-451 VR-452 on Record Line	1. METER switch in NORMAL. 2. Adjust to obtain 0 VU on the VU meter.
	Record Head Azimuth Adjustment	AF Oscillator to the LINE IN jack 10KHz −28dB (31mV)	Oscilloscope to OUTPUT jack	SOURCE & TAPE	Record Azimuth Screw on Head Assy'	RECORD MODE → ON 1. Move the MONITER switch to the TAPE position. 2. Adjust for maximum Indication. 3. Both channels on the Oscilloscope to be in Phase.
⑥	*Bias Trap Adjustment*	No signal	VTVM or Oscilloscope across the Test Point & ground (on the REC P.C.B.)	SOURCE	L-503 L-504 on Record	1. Depress REC and "PAUSE" buttons. 2. Using TEAC Test Tape YTT-8013. 3. BIAS switch to #1 4. RECORD MODE → ON 5. Adjust for minimum.
⑦				TAPE	L-251 L-252 on Play Line	5. Adjust L-251/252 for minimum bias leakage reading at OUTPUT jacks Spec. −45 dB or less.
⑧	*Bias # 1 Adjustment*	7 KHz −18 dB (97mV)	VTVM to OUTPUT jack		VC-551 VC-552 on Bias Osc	1. Using TEAC Test Tape YTT-8013. 2. BIAS/EQ switch to #1. 3. Adjust clockwise a decrease 2 dB from the peak. See Fig.13
⑨	*Record Level Set*	400 Hz −8 dB (308mV)			VR-453 VR-454 on Record Line	1. Using TEAC Test Tape YTT-8013. 2. BIAS/EQ switch to #1. 3. Adjust for 0 dB at OUTPUT jack.
⑩	*Overall Frequency Response*	30 Hz to 28 KHz			VR-503 (HIGH) VR-504 on Record	1. BIAS/EQ switch to #1. 2. Using TEAC Test Tape YTT-8013. 3. Adjust for each channel
⑪	at −28dB (31mV)	40 Hz to 24 KHz			VR-502 (LOW) VR-501 on Record	1. Place the SPEED switch to LOW. 2. Adjust for each channel
⑫	*Bias # 2 Adjustment*	30 Hz to 24 KHz			VR-552 on Bias Osc	1. BIAS/EQ switch to #2. 2. Using TEAC Test Tape YTT-8003; Adjusts both channels together.
⑬	*Bias # 3 Adjustment*	30 Hz to 24 KHz			VR-551 on Bias Osc	1. BIAS/EQ switch to #3. 2. Using TEAC Test Tape YTT-8023; Adjusts both channels together. 3. Repeat Overall response check at LOW, both speeds refer to response Limits given in Fig. 15,16

If the TEAC YTT-series blank test tapes (8013,8003,8023) are not available use any of the tapes listed on page 12 that require the same EQ switch and BIAS switch settings.

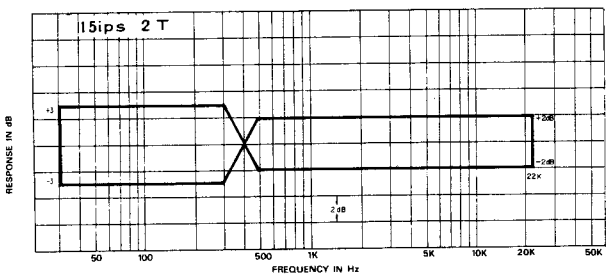
FREQUENCY RESPONSE CHART 2T.4T

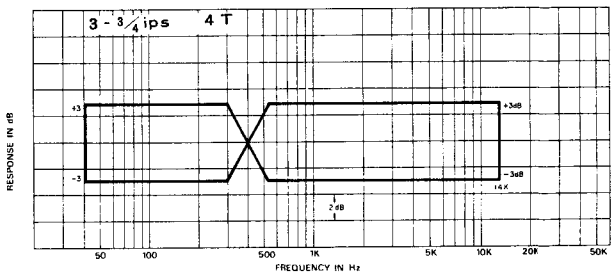
PLAYBACK PERFORMANCE (2T,4T)

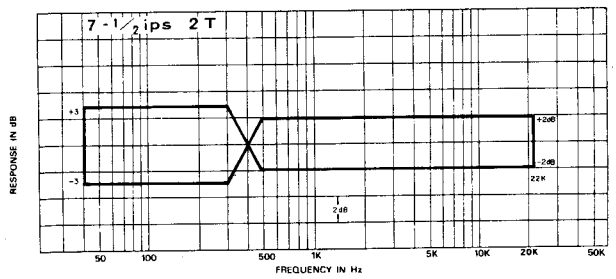
1. Play Test Tape that matches the speed of your deck:

   15 ips 2T.....YTT-1004
   7-1/2 ips 2T, 4T...YTT-1003
   3-3/4 ips 4T.....YTT-1002

2. Set output controls to specified level. Compare output reading to following charts.







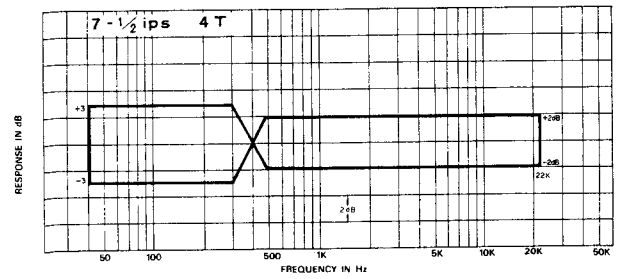


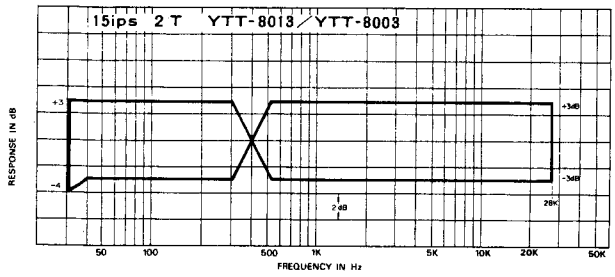
Fig.14 Frequency Response Limits
- Playback -

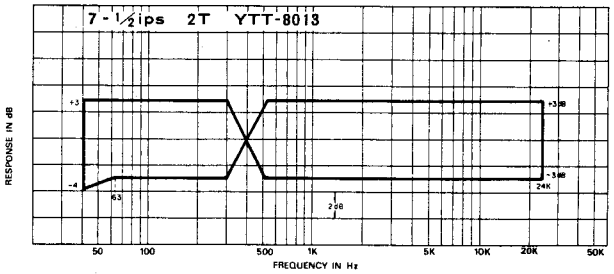
FREQUENCY RESPONSE CHART 2T

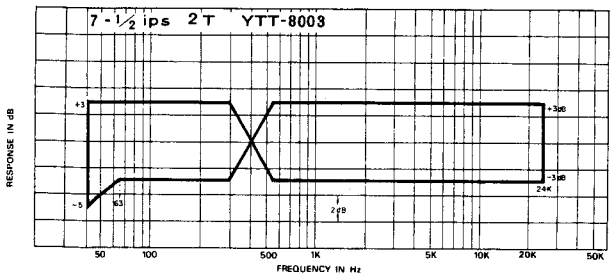
RECORD PERFORMANCE (2T,4T)

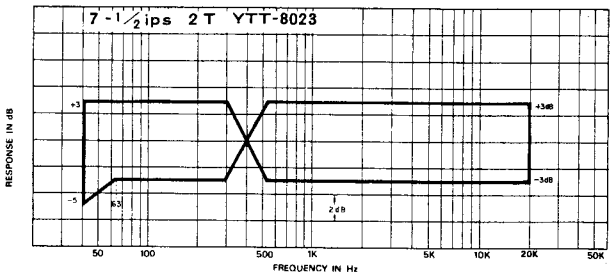
1. Measured with input 20 dB below the Specified input level.
2. Level should correspond to charts below (per Speed employed).
3. Set BIAS. EQ switches to match the Tape you are using per the chart below:

   BIAS. EQ #1 YTT-8013
   BIAS. EQ #2 YTT-8003
   BIAS. EQ #3 YTT-8023
4. Repeat Frequency Response check for all speeds.









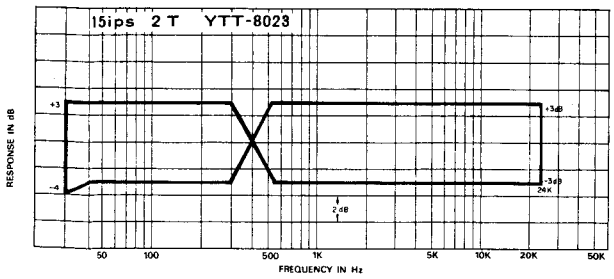


Fig.15 Frequency Response Limits

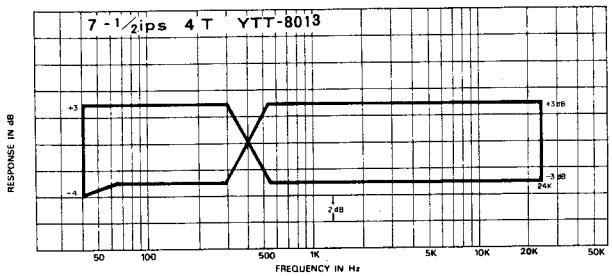
- Record -

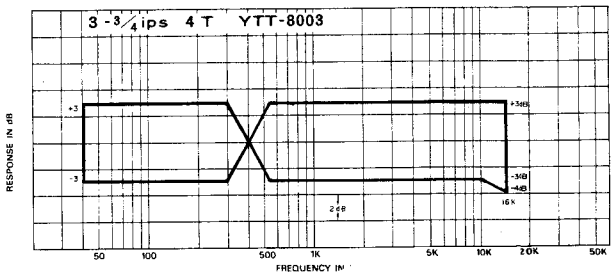
Recommended BIAS and EQ switch settings for various types of tape

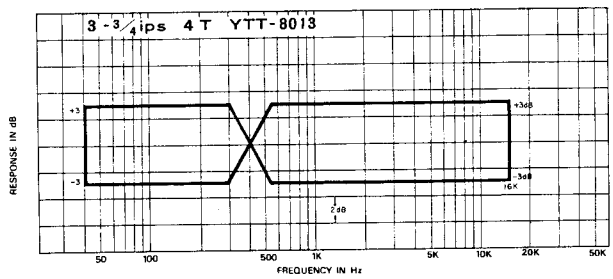
1 mil base tape (recommended for 2-track or 4-track decks)				1-1/2 mil base tape (recommended for 2-track decks only)			
Brand	Type or model	BIAS	EQ	Brand	Type or model	BIAS	EQ
MAXELL	UD-35	1	1	MAXELL	UD-50	1	1
FUJI-FILM	FG-150	1	1	SONY	SHL-11-740B	1	1
SONY	SHL series	1	1	SCOTCH	211	1	1
TDK	AUDUA series	1	1	BASF	SPR-50LH	2	2
FUJI-FILM	FB-151	2	2	MEMOREX	1200	2	2
BASF LRP or	LP-35LH	2	2	FUJI FILM	FB-101	2	2
MEMOREX	1800	2	2	SCOTCH	111 or its Equivalent	3	3
FUJI-FILM	FM-150	3	3				
SCOTCH	150 or its equivalent						

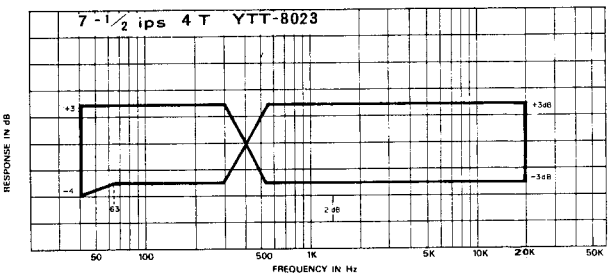
Cont' on next page.....

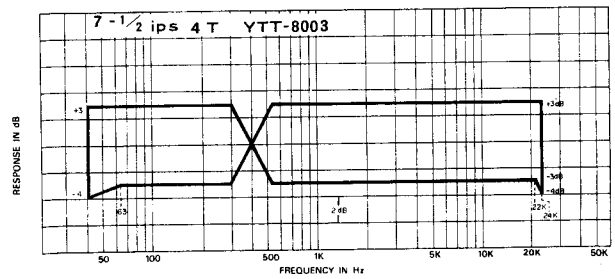
FREQUENCY RESPONSE CHART 4T











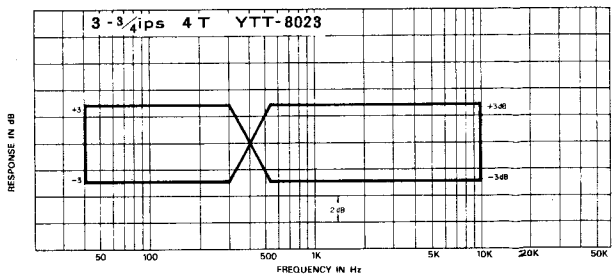


Fig. 16 Frequency Response Limits
- Record -

TROUBLESHOOTING

MALFUNCTION	POSSIBLE SOURCE OF TROUBLE
- Pilot Lamps (in VU Meters) do not illuminate when power is applied	Fuse F701 (2A) burned out
- Fuse burns out (blows) when power is applied	Defective Power transformer (T151)
- Capstan will not rotate	Specified 24V DC present on the CAPSTAN MOTOR ASS'Y J152 Pins #1~7 └Defective CAPSTAN ASS'Y Specified 24V DC not present on the STABILIZER UNIT J21 Pins #11,#12 └Defective STABILIZER UNIT ASS'Y or Connector loose Specified 32V DC not present on the STABILIZER UNIT J21 Pins #13,#14 └Defective D10~D13 or Power transformer (T151)
- Transport inoperative in Forward Playback	Faulty Safety switch (SW155)
- Pinch roller fails to engage completely	Voltage present on the CAP SOL.1 terminals └CAP SOL.1 Disconnected High-Level voltage (approx.3V) present on the SOLENOID DRIVE UNIT J121 Pin #3 └Defective Q121 or Q122 High-Level output voltage not present on the CONTROL UNIT P41 Pin #1 └Defective CONTROL UNIT
- Right Reel Motor does not rotate	Fast Forward OK ..... Defective Q71 or K72 High-Level output voltage not present on the CONTROL UNIT P41 Pins #1 or #2 └Defective CONTROL UNIT High-Level output voltage present on the REEL MOTOR DRIVE UNIT at H terminal └Defective Reel Motor
- Neither Reel Motor rotates	Brakes not dis-engaged └Disconnected brake Solenoid R or L, Defective Q125 or Q126 High-Level output voltage present on the SOLENOID DRIVE UNIT J21 Pin #8 └Defective SOLENOID DRIVE UNIT High-Level output voltage not present on the CONTROL UNIT P41 Pin #2 └Defective CONTROL UNIT
- Fast Forward or Rewind modes inoperative (Playback is OK)	High-Level output voltage not present on the CONTROL UNIT P41 Pins #4,#7 └Defective CONTROL UNIT High-Level output voltage present on the CONTROL UNIT P41 Pin #2 └Defective SOLENOID DRIVE UNIT (Q125,Q126)

TROUBLESHOOTING

MALFUNCTION	POSSIBLE SOURCE OF TROUBLE
- Transport inoperative (Capstan only rotates)	Specified 8V DC present on the STABILIZER UNIT J21 Pins #5, #6 → Defective STABILIZER UNIT
	Specified 8V DC not present on the STABILIZER UNIT J21 Pins #5, #6 → Faulty D14~D17 or fuse F2 (2A)
- Cannot select PAUSE	Defective CONTROL UNIT
- Amplifier inoperative	Voltage not present on P151 at Pin #10 or #11 (To ampl. connector) → Fuse F1 (2A),F4 (0.5A) burned out
	Voltage present on P151 at Pins #10 or #11 → Defective Q601, Q602, Q603 (on AMPL. STABILIZER UNIT)
- Playback audio intermittent or absent	
a) Both channels inoperative (SOURCE OK)	Defective Q207, Q208, Q209 or associated parts
b) R-Ch or L-Ch inoperative	SOURCE also inoperative → Defective Q301 or associated parts
	SOURCE Monitor function normal → Defective Q201, Q203, Q205, Q207, Q251, Q253, Q255 or associated parts
- Playback sound is not clear	High Freq. weak.....Dirty head, incorrect Adj. of VR201/203
	Sound distorted.....Defective Q201, 203, 205
- VU Meter inoperative in TAPE Monitor mode (sound is normal)	Defective Q306 or associated parts, Faulty VU Meter ass'y
- Hum in playback signal	Defective Playback head
- Intermittent or absence of audio at PHONES jack	Defective Q303, Q305 Q307 or associated parts
- LINE IN signal is not applied to SOURCE (Playback normal)	Defective Q405, Q406, Q451, Q453...etc
- Will not Record	No Erase.....Defective K551, Q551 ~ 554, T551
	Erase normal.....Sound normal at SOURCE → Defective Q507, Q509, Dirty or defective record head
- Recorded sound not clear	Dirty record head, incorrect Bias Adj. or Defective Q505
- Inoperative MIC Recording (LINE IN signal normal)	Defective Q401~Q404....etc
- Hum in Recording signal	Defective Record head or P702 connector loose or heads magnetized

Note: Explanation of abbreviations and circuit component designations.
F...Fuse D...Diode SW...Switch K...Relay T...Transformer
J...Pin jack (Female) Connector P...Pin plug (male) connector
High-Level output voltage -Logic true level approx. +3V.
Refer to the circuit diagram for further assistance in locating possible defective circuit components.

tu 65

TEAC®

A-7300/2T

STEREO TAPE DECK

PARTS LIST

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I-3.	LOWER MAIN CHASSIS	6	7
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SUPPLIED ACCESSORIES 7

ASSEMBLING HARDWARE CODING LIST ..... INSERTION

PARTS ORDERING INFORMATION

Spare parts are available through your nearest TEAC Authorized Service Center or directly from the TEAC office, the address of which is written on the back cover. When ordering parts, always include the following information:

1. MODEL
2. REF. NO.
3. PARTS NO.
4. DESCRIPTION
5. UNIT SERIAL NO.
6. MANUAL CODE NO.

NOTICE REGARDING PARTS ORDERS

1. Do not order by only REF. NO.
2. In some instances, individual minor parts are not available.
   In such a case, the entire assembly including the part requested will be sent to you.

PARTS IDENTIFICATION CODING

Parts are identical between the different models with the exceptions as coded by the designations explained below.

TCA — TEAC Corporation of America, U.S.A. version only.

EX — All export versions (except TCA or Japan).

4T — For decks with the 4 track head configuration (standard).

2T — For decks with the 2 track head configuration. (These decks have 2T included in the nomenclature, i.e., A-7300-2T).

Effective: June, 1975
Latest Revision No.: S-124

TEAC CORPORATION

51031520

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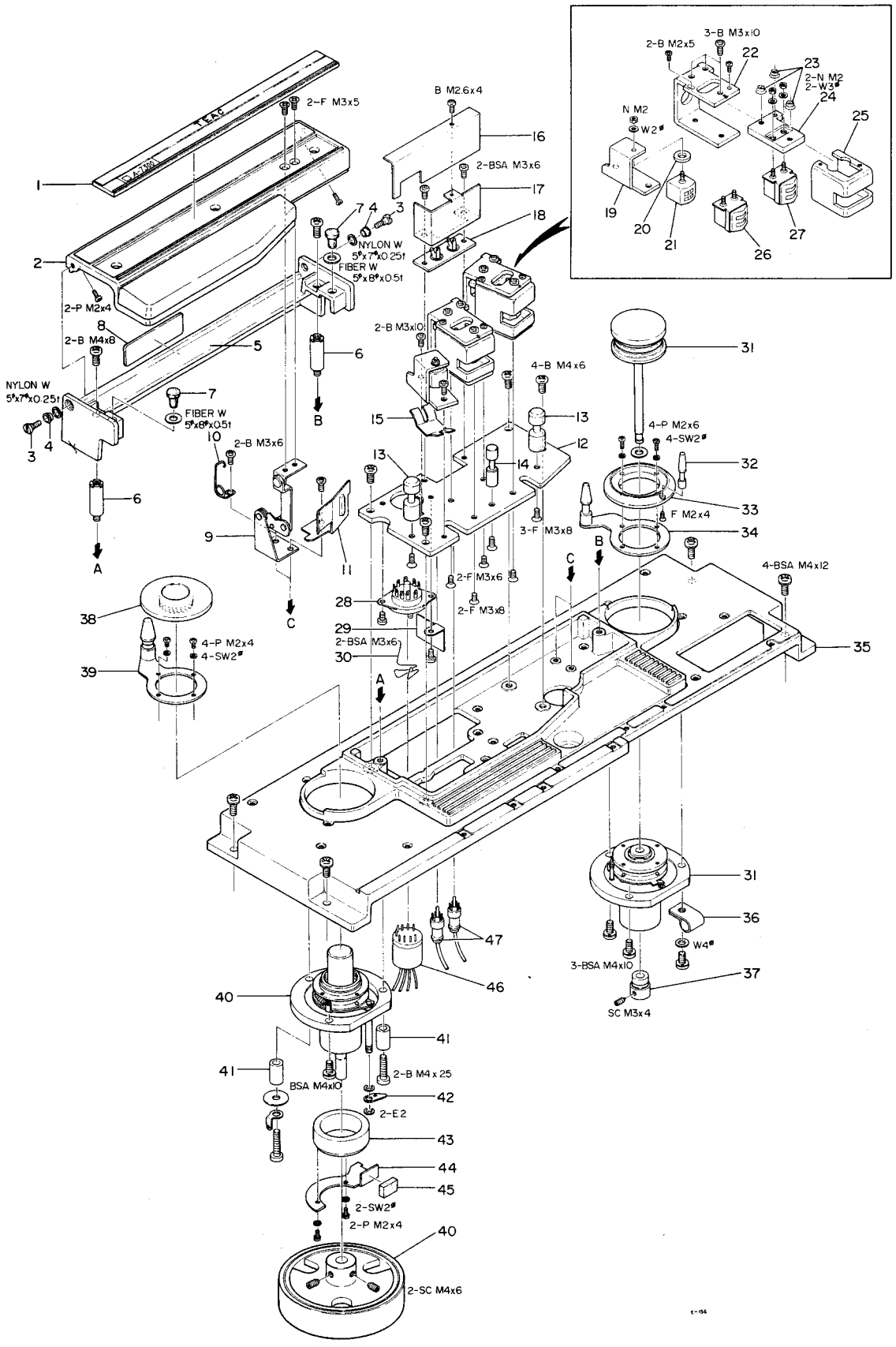
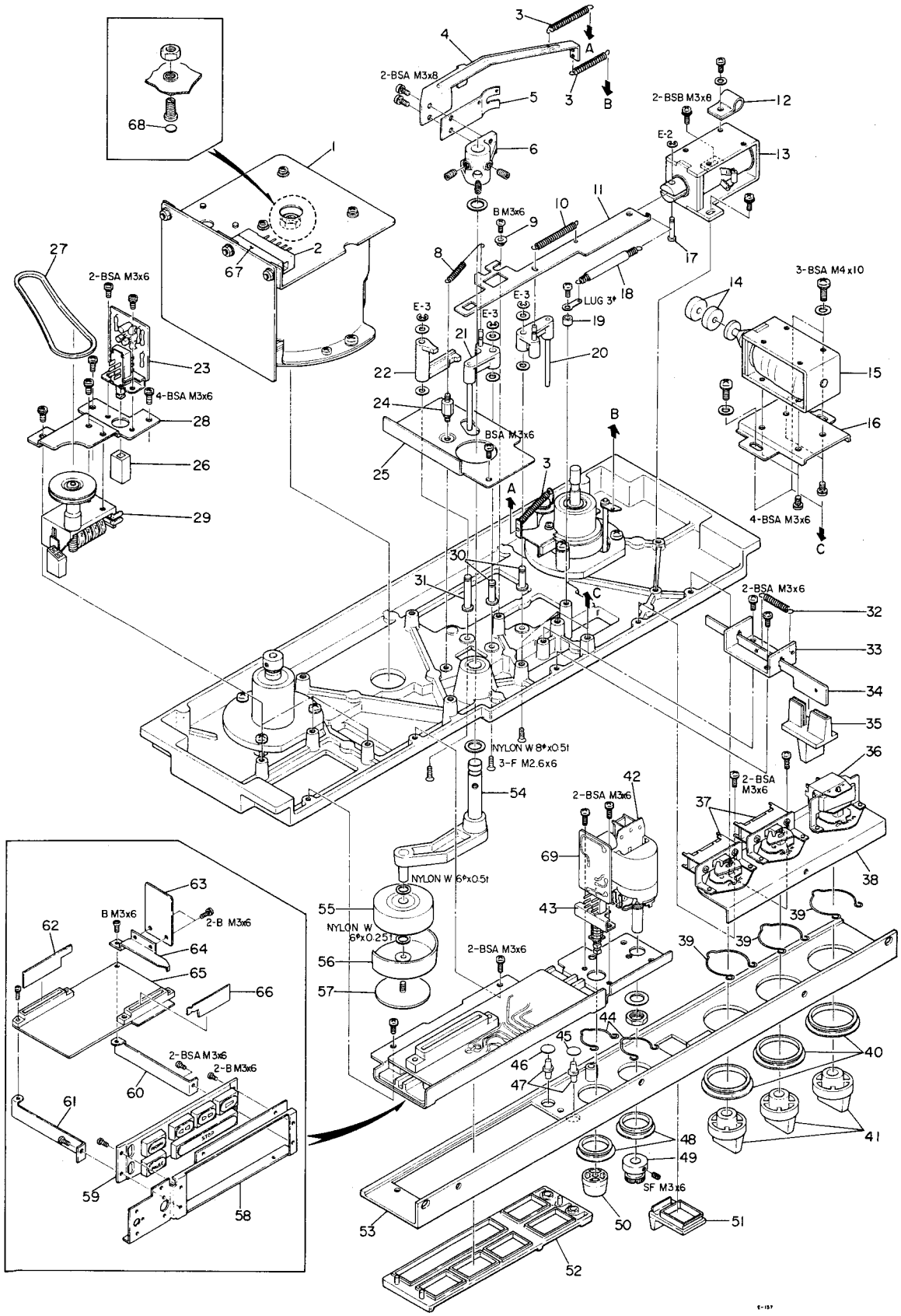
I. EXPLODED VIEWS AND PARTS LIST

I-1. CENTER BASE SECTION (Exploded Front View)



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	55005020	Name Plate Assy, Housing; B [A-7300]	
1- 2	55305111	Head Housing	
1- 3	55405150	Screw, Hinge	
1- 4	55405160	Collar, Hinge	
1- 5	55305121	Base, Head Housing	
1- 6	55405011	Stud, Head Housing Mounting	
1- 7	55305390	Cushion, Rubber	
1- 8	55507480	Plate, Cover	
1- 9	55002271	Link Assy, Head Housing	
1-10	55202050	Spring, Head Housing	
1-11	55540780	Anti-spoiler	
1-12	55507530	Plate, Housing Base	
1-13	55440340	Tape Guide, B	
1-14	55440730	Tape Guide, C	
1-15	55202020	Spring, Head Adjusting	
1-16	55507630	Shield, Pin Jack	
1-17	55540470	Shield, A	
1-18	50435070	Jack, Pin; 2P	
1-19	55507160	Plate, Erase Head	
1-20	50136540	Spacer, Erase Head	
1-21	50662030	Head, Erase (2T-2CH)	2T
	50663030	Head, Erase (4T-2CH)	4T
1-22	55507170	Bracket, Head Plate	
1-23	50220500	Spring, Head; B	
1-24	55305100	Plate, Head	
1-25	55507180	Head Shield	
1-26	50664520	Head, Record (2T-2CH)	2T
	50664540	Head, Record (4T-2CH)	4T
1-27	50664530	Head, Playback (2T-2CH)	2T
	50664550	Head, Playback (4T-2CH)	4T
1-28	50435040	Socket, 9P (w/Clamp)	
1-29	55540480	Shield, Socket; B	
1-30	50429060	Clip, Socket Retaining; Small	
1-31	55040150	Drive Roller Assy	
1-32	55440490	Pin, Tape Guide	
1-33	55441240	Ring, Tension Arm	
1-34	55040170	Tension Arm, R	
1-35	55305031	Base, Center Mounting	
1-36	50276290	Clamp, Wire; B	
1-37	55440500	Pulley, Drive Roller; 2T	2T
1-38	55405100	Cap, A	
1-39	55040552	Tension Arm Assy, L	
1-40	55002051	Impedance Roller Assy	
1-41	55440830	Spacer, Impedance Roller	
1-42	55541550	Hook, Spring; T	
1-43	55440820	Ring, Damper	
1-44	55541890	Arm, Damper	
1-45	55541900	Cushion, Damper Arm	
1-46	50432740	Connector, 9P (Plug)	
1-47	50478430	Cord, Head Connection	

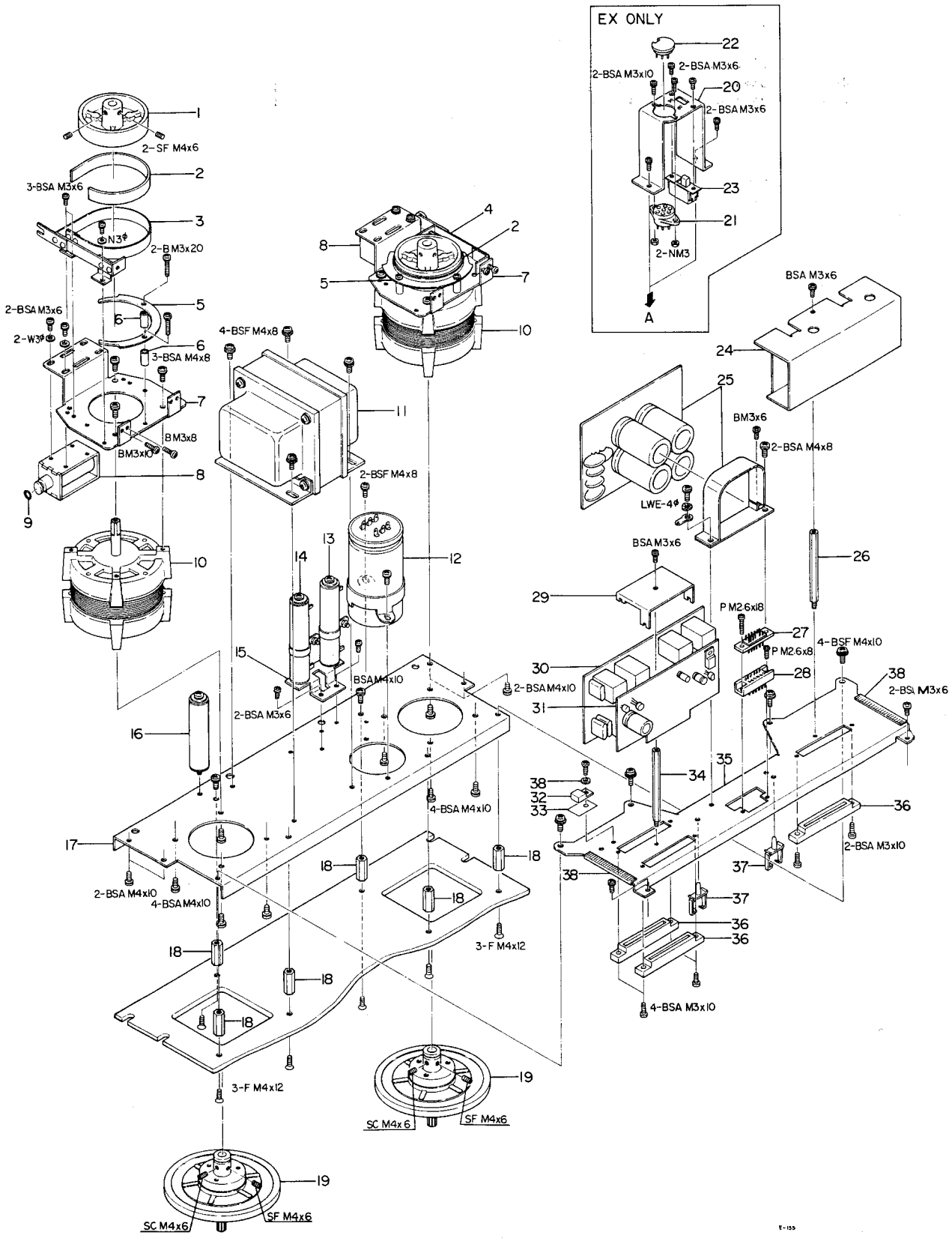
I-2. CENTER BASE SECTION (Exploded Rear View)



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	71060070	Direct Drive Capstan Motor Assy	2T
	71060080	Direct Drive Capstan Motor Assy	4T
2- 2	50436190	Socket, Multi-; 11P	
2- 3	55202170	Spring, Tension	
2- 4	55541210	Arm, Actuating	
2- 5	50221152	Spring, Pressure	
2- 6	55305190	Arm, Solenoid	
2- 7		(not used)	
2- 8	55202090	Spring, Lifter	
2- 9	55405380	Washer, Shoulder; 3 × 7	
2-10	55202070	Spring, Pinch Roller	
2-11	55507200	Link, Plunger	
2-12	50276280	Clamp, Wire; A	
2-13	51630010	Solenoid, Plunger; B	
2-14	55541070	Damper, Solenoid	
2-15	51630000	Solenoid, Plunger; A	
2-16	55507210	Bracket, Solenoid Mounting	
2-17	55405170	Pin, Plunger	
2-18	55202080	Spring, Link	
2-19	55405340	Spacer, 3 × 3	
2-20	55305200	Arm, Tape Lifter; A	
2-21	55305210	Arm, Tape Lifter; B	
2-22	55305160	Arm, Cue	
2-23	51680670	PC Bd. Assy, REWIND STOP UNIT	2T
2-24	55405360	Stud, Hook; A	
2-25	55540460	Shield, Motor	
2-26	55305250	Button	2T
2-27	55340320	Belt, Counter; 14 × 61.5	
2-28	55507230	Bracket, Counter	
2-29	55005000	Counter, Index	2T
	55005060	Counter, Index; A	4T
2-30	55405020	Stud, A	
2-31	55405030	Stud, B	
2-32	55202100	Spring, Cue Return	
2-33	55507190	Journal, Cue Link	
2-34	55507220	Link, Cue	
2-35	55305150	Lever, Cue	
2-36	51330010	Switch, Rotary Toggle	
2-37	51330020	Switch, Rotary Slide	
2-38	55507300	Bracket, Switch; A	
2-39	55202030	Retaining Ring, Escutcheon; A	
2-40	55405330	Escutcheon, A	
2-41	55305280	Knob, Rotary Switch	
2-42	51500071	Var. Res. (w/Switch) 500 Ω-B	
2-43	50444740	Switch, Mini Double-push	2T
	50443930	Switch, Mini Double-push	4T
2-44	55202040	Retaining Ring, Escutcheon; B	
2-45	55507270	Insert, Red	
2-46	55507280	Insert, Green	
2-47	55305260	Light Cover	
2-48	55405320	Escutcheon, B	
2-49	55440380	Knob, Pitch Control	
2-50	55305290	Pushbutton	
2-51	55305300	Hook, Cue Lever	
2-52	55305310	Cover, Transport Pushbutton	
2-53	55002260	Panel, Control Mounting; D	2T
	55002250	Panel, Control Mounting; C	4T
2-54	55305170	Arm, Pinch Roller	
2-55	55002100	Pinch Roller	
2-56	55340160	Cover, Pinch Roller	2T
2-57	55405180	Cap, Pinch Roller	
2-58	55540310	Bracket, Pushbutton; C	

(Continued on page 18.)

I-3. LOWER MAIN CHASSIS



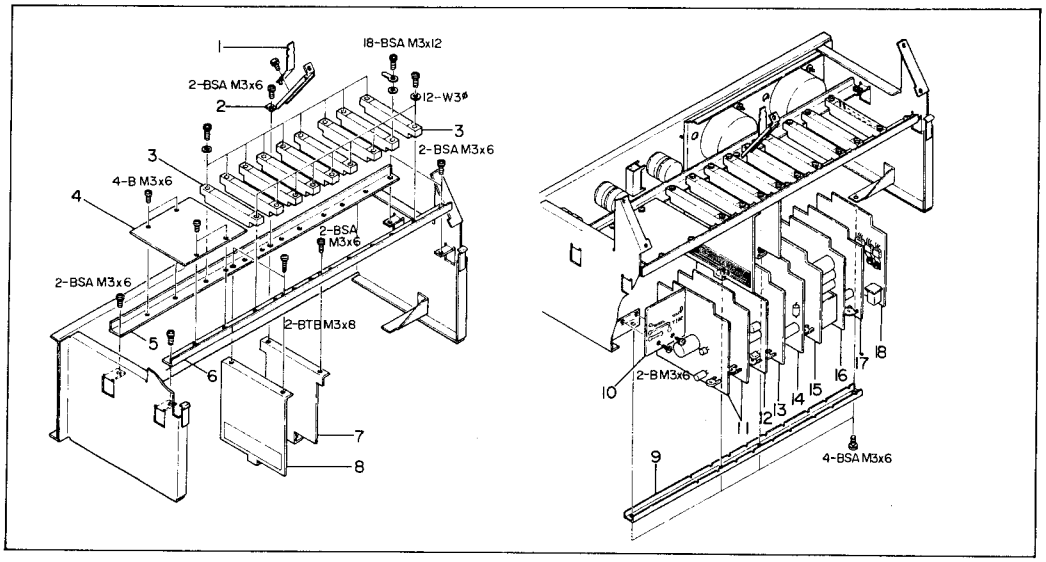
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	50173570	Drum, Brake	
3- 2	55541560	Felt, Brake	
3- 3	50173391	Brake Band Assy, R	
3- 4	50173331	Brake Band Assy, L	
3- 5	50173481	Retainer, Brake Shaping	
3- 6	50173490	Spacer, Brake Retainer	
3- 7	50173601	Plate, Reel Motor; P	
3- 8	51630050	Solenoid, Brake; R	
3- 9	55302510	"O" Ring, P-4 (Spacer)	
3-10	71041080	Motor, Reel	
3-11	51520220	Transformer, Power	TCA
	51520230	Transformer, Power	EX
3-12	51700050	Cap., MP; (7+1.5) μF × 2 250V	
3-13	50524412	Resistor, Wire Wound 100 Ω 30H	
3-14	50522420	Resistor, Wire Wound 30 Ω 30H	
3-15	55540570	Plate, Resistor	
3-16	50522410	Resistor, Wire Wound 600 Ω 30H	
3-17	55520250	Chassis, Reel Motor	
3-18	50161950	Standoff, Reel Motor	
3-19	55040880	Reel Table Assy	
3-20	55541240	Bracket, Voltage Selector	EX
3-21	50435060	Socket, Voltage Selector	EX
3-22	50432990	Plug, Voltage Selector	EX
3-23	50444560	Switch, Slide; 6P	EX
3-24	51681250	PC Bd. Assy, STABILIZER UNIT	
3-25	51681300	PC Bd. Assy, POWER SUPPLY UNIT	
3-26	55405000	Stud, PC Board; A	
3-27	50436631	Plug, 12P	
3-28	50438411	Socket, 12P	
3-29	55541220	Bracket, PC Board; B	
3-30	51681311	PC Bd. Assy, REEL MOTOR DRIVE UNIT	
3-31	51681455	PC Bd. Assy, SOL. DRIVE UNIT	
3-32	50425460	Transistor, 2SA490-Y	
3-33	50332910	Sheet, Insul.; Mylar	
3-34	55440700	Stud, PC Board; B	
3-35	55520240	Chassis, Connector Mounting	
3-36	50438380	Connector, PC; 14P	
3-37	50332580	Clamp, Wire; E	
3-38	50332950	Washer, Insulating	

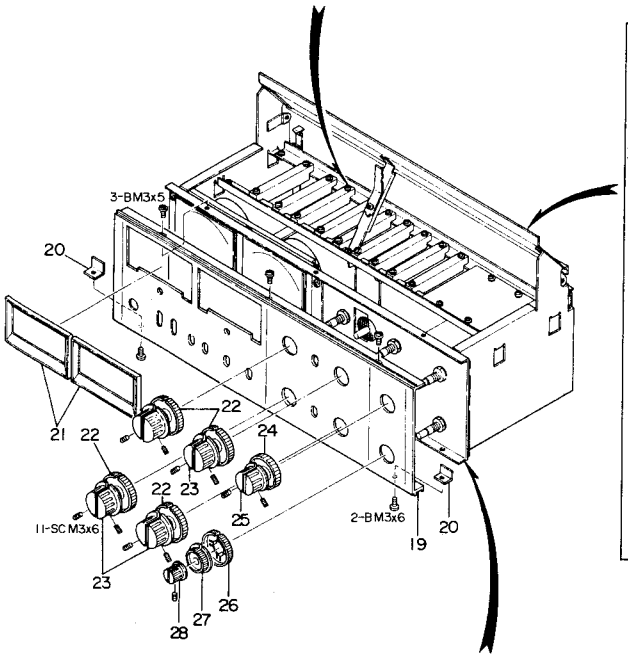
SUPPLIED ACCESSORIES

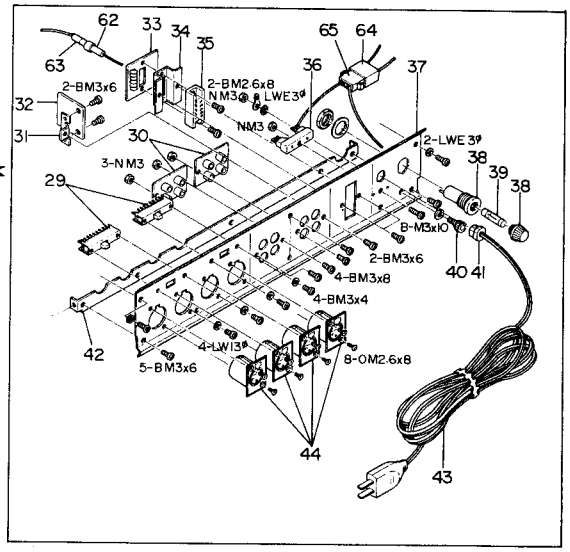
REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	50471250	Cords, Input-output Connection, × 2	
	57100300	Cleaning Stick (TZ-275)	
	50629620	Splicing Tape	
	50291350	Silicone Cloth	
	50411010	Fuse, 1A	EX 220V/240V area
	50411140	Fuse, 2A	EX 100V/117V area
	50411440	Fuse, 2A —250V (UL)	TCA
	50860090	Hex Wrench Kit (M3 & M4)	
	55980500	Reel Adapter Clamp (TZ-612), × 2	
*	RE-1002	Empty Reel, 10 inch	
	51012500	A-7300 Owner's Manual	TCA
	51012540	A-7300 Owner's Manual	EX

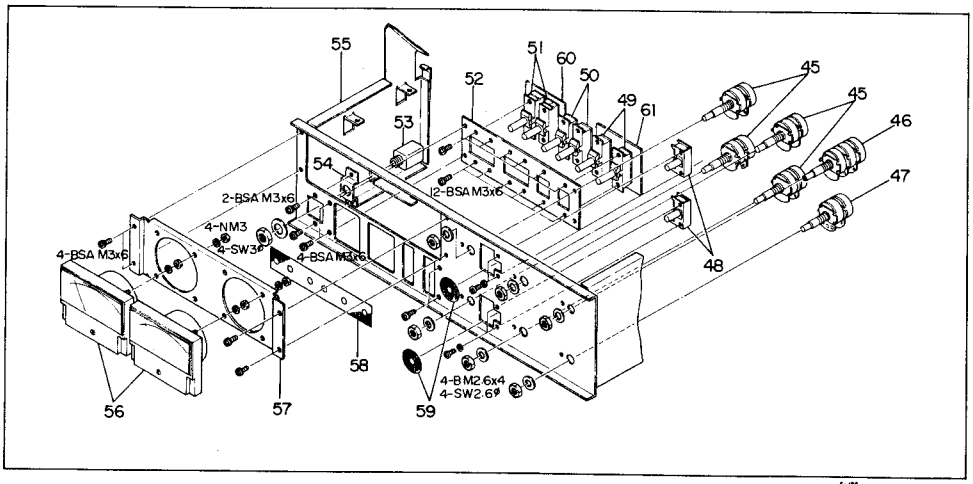
NOTE: The Empty Reel is available as an Optional Accessory and thus is not assigned a special TEAC parts number. Please order this by the MODEL CODE NUMBER (RE-1002). This number is included on the package.

I-4. AMPLIFIER SECTION





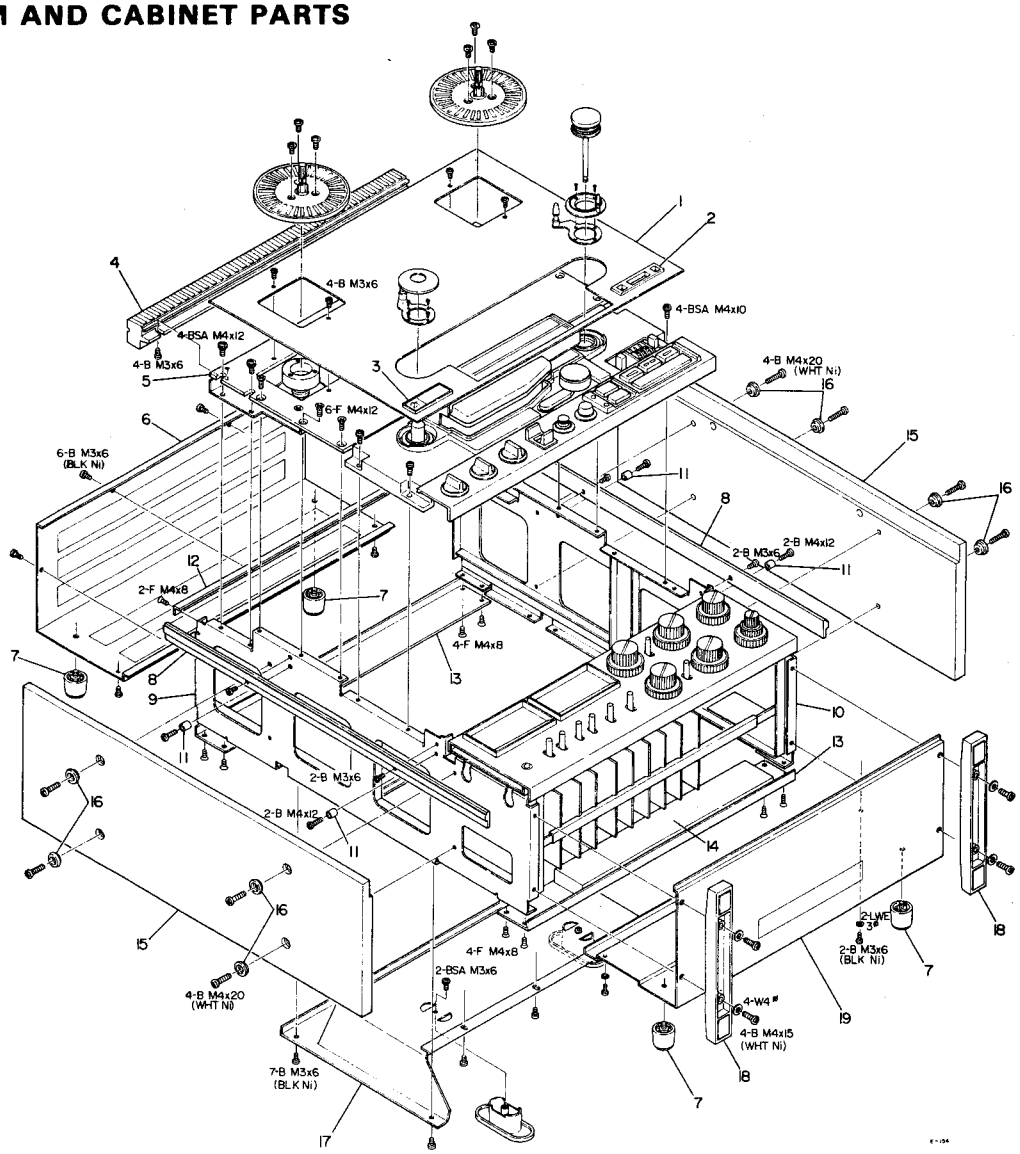




REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4- 1	55507510	Clamp, Cable Guide	
4- 2	55507360	Plate, Panel Reinforcing	
4- 3	50438380	Connector, PC; 14P	
4- 4	51680840	PC Bd. Assy, Mic. Transformer	
4- 5	55507550	Angle, PC Board; A	
4- 6	55507560	Angle, PC Board; B	
4- 7	55507341	Plate, Reinforcing; C	
4- 8	55541200	Plate, Shield	
4- 9	55507610	Holder, PC Board	
4-10	51680460	PC Bd. Assy, Equalizer Relay	
4-11	51680801	PC Bd. Assy, MIC MIXING AMP UNIT, A	
4-12	51681241	PC Bd. Assy, PLAY EQ AMP UNIT, D	2T
	51680901	PC Bd. Assy, PLAY EQ AMP UNIT, C	4T
4-13	51680780	PC Bd. Assy, PLAY LINE AMP UNIT, A	
4-14	51680790	PC Bd. Assy, METER PHONE AMP UNIT, A	
4-15	51680811	PC Bd. Assy, REC LINE AMP UNIT, A	
4-16	51680831	PC Bd. Assy, AMP STABILIZER UNIT	
4-17	51680891	PC Bd. Assy, RECORD AMP UNIT, B	2T
	51680881	PC Bd. Assy, RECORD AMP UNIT, A	4T
4-18	51680821	PC Bd. Assy, BIAS OSC UNIT	
4-19	55002220	Panel, Ampl. Trim	
4-20	55507350	Holder, Ampl. Chassis	
4-21	55305370	Escutcheon, VU Meter	
4-22	55305341	Guide, Memory Marker; Large	
4-23	50253670	Knob, Medium	
4-24	55305351	Guide, Memory Marker; Small	
4-25	50253820	Knob, B-30B	
4-26	55305361	Guide, Memory Marker; B	
4-27	55305330	Knob, Lower	
4-28	50253750	Knob, Small	
4-29	50444730	Switch, Slide; 6PDT	
4-30	50436580	Jack, Pin; 4P	
4-31	55540820	Angle, PC Board	
4-32	51681220	PC Bd. Assy, Termination	
4-33	51680690	PC Bd. Assy, Capacitor Mounting	
4-34	55540990	Plate, Connector Mounting	
4-35	50438411	Socket, 12P	
4-36	50438350	Terminal Strip, 2P	
4-37	55002210	Panel, Rear Connection	
4-38	50412280	Fuse Holder	TCA
	50924500	Fuse Holder	EX
4-39	50411440	Fuse, 2A-250V (UL)	TCA
	50411140	Fuse, 2A	EX 100V/117V area
	50411010	Fuse, 1A	EX 220V/240V area
4-40	50454071	Post, Grounding	
4-41	55300470	Strain Relief, AC Power Cord	
4-42	55507620	Angle, Panel Mounting	
4-43	50471661	Cord, AC Power	TCA
	50471652	Cord, AC Power	EX
4-44	60520070	Receptacle, Cannon; XLR-3-31 (Female)	
4-45	51500040	Var. Res. (w/"Snap Stop"), 100 kΩ-A	
4-46	51500020	Var. Res. (w/"Snap Stop"), 50 kΩ-B × 2	
4-47	51500030	Var. Res. (w/"Snap Stop"), 50 kΩ-A × 2	
4-48	51310030	Switch, Slide; 4PDT	
4-49	50447430	Switch, Lever; 4PDT (part of PC Bd. Assy)	
4-50	50447440	Switch, Lever; 4PDT	
4-51	50447420	Switch, Lever; 4P3T (part of PC Bd. Assy)	
4-52	55507370	Plate, Lever Switch Mounting	
4-53	50433030	Jack, 3-wire	
4-54	55507380	Bracket, Jack Mounting	
4-55	55010030	Chassis Assy, Ampl.	
4-56	51650011	VU Meter	

(Continued on page 18.)

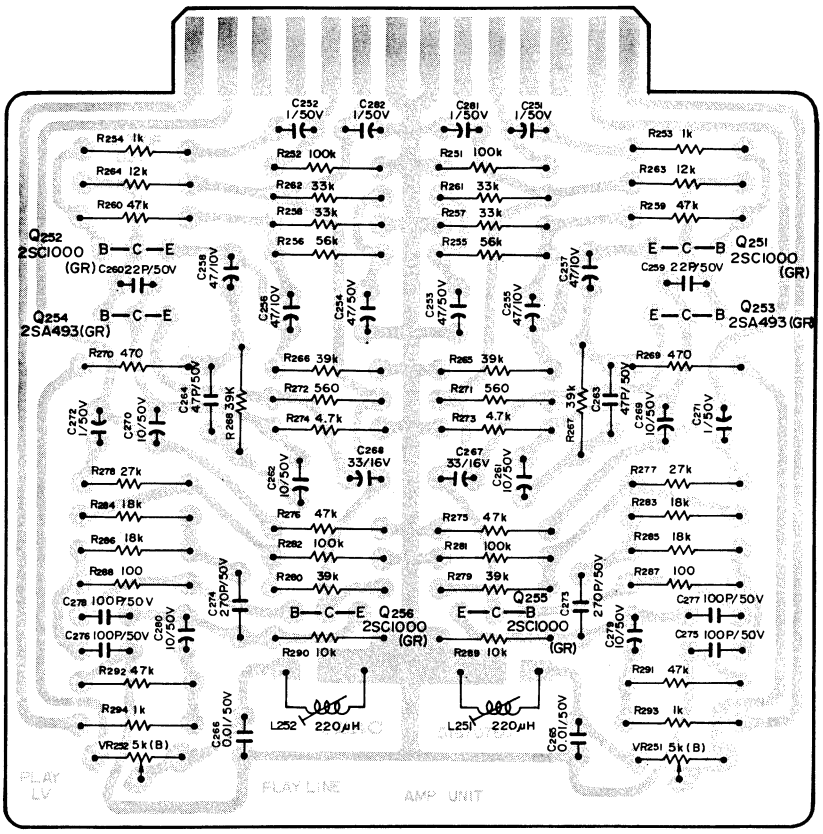
I-5. TRIM AND CABINET PARTS



REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
5- 1	55507000	Panel, Trim	
5- 2	55340250	Cover, Counter	4T
	55340190	Cover, Counter	2T
5- 3	55540530	Name Plate, 2 Track	2T
5- 4	55320051	Air Vent	
5- 5	55520260	Panel, Chassis; R	
5- 6	55520290	Cover, Top	
5- 7	55340590	Mounting Foot, Round	
5- 8	55530200	Sash, Trim; Side	
5- 9	55020080	Panel Assy, Side; L	
5-10	55020090	Panel Assy, Side; R	
5-11	50241850	Spacer, Sideboard	
5-12	55530210	Angle, Front	
5-13	50235312	Angle, Rear Cover	
5-14	55340690	Cushion, PC Board	
5-15	55020101	Sideboard	
5-16	50276930	Washer, Trim	
5-17	55030170	Cover Assy, Rear; A	
5-18	55002310	Mounting Foot Assy, Rectangular	
5-19	55520270	Cover, Bottom	

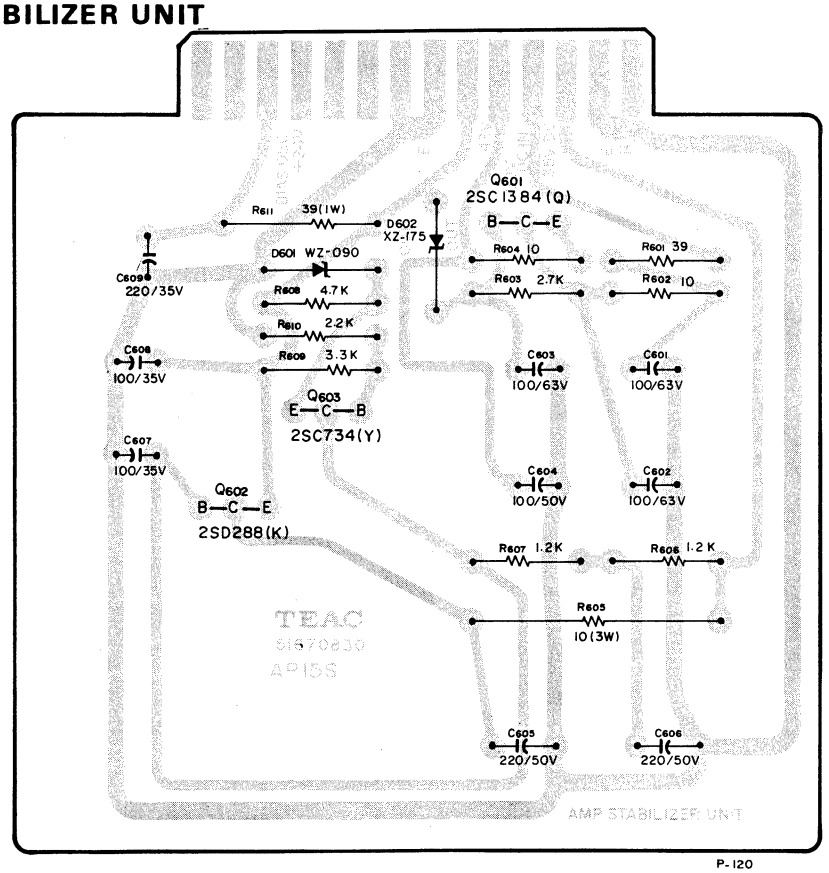
II. PC BOARD SECTION (Diagram)

II-1. PLAY LINE AMP UNIT



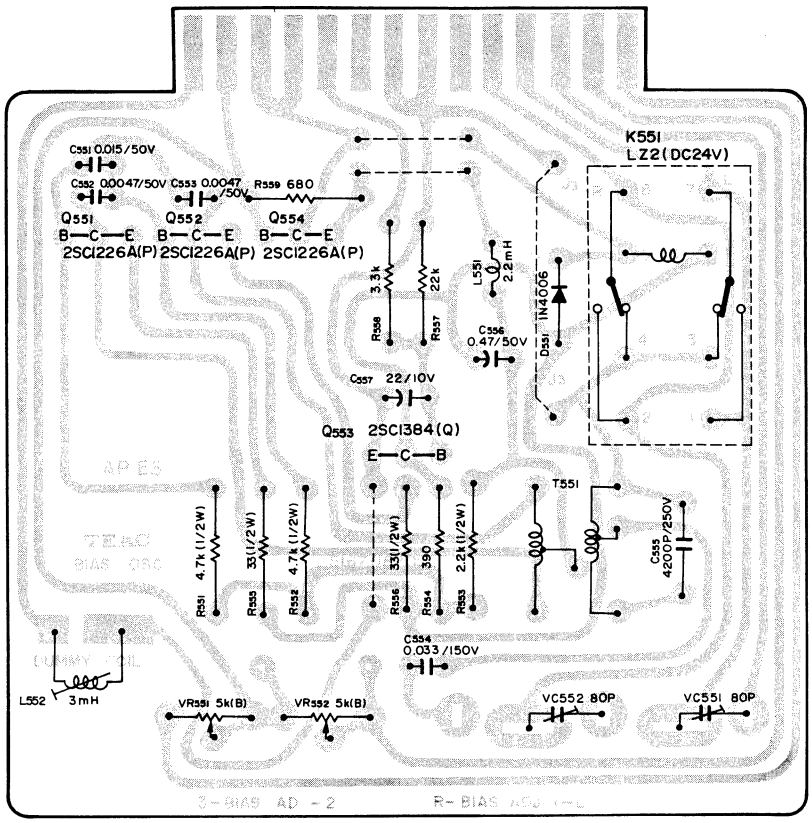
Foil Side

II-2. AMP STABILIZER UNIT



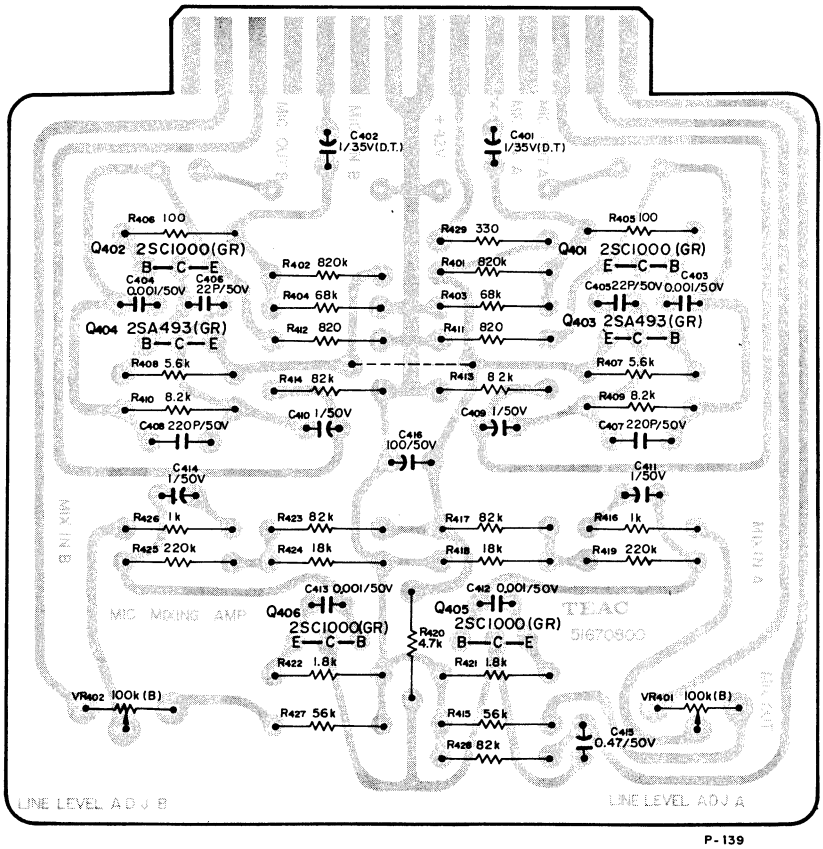
Foil Side

II-3. BIAS OSC UNIT



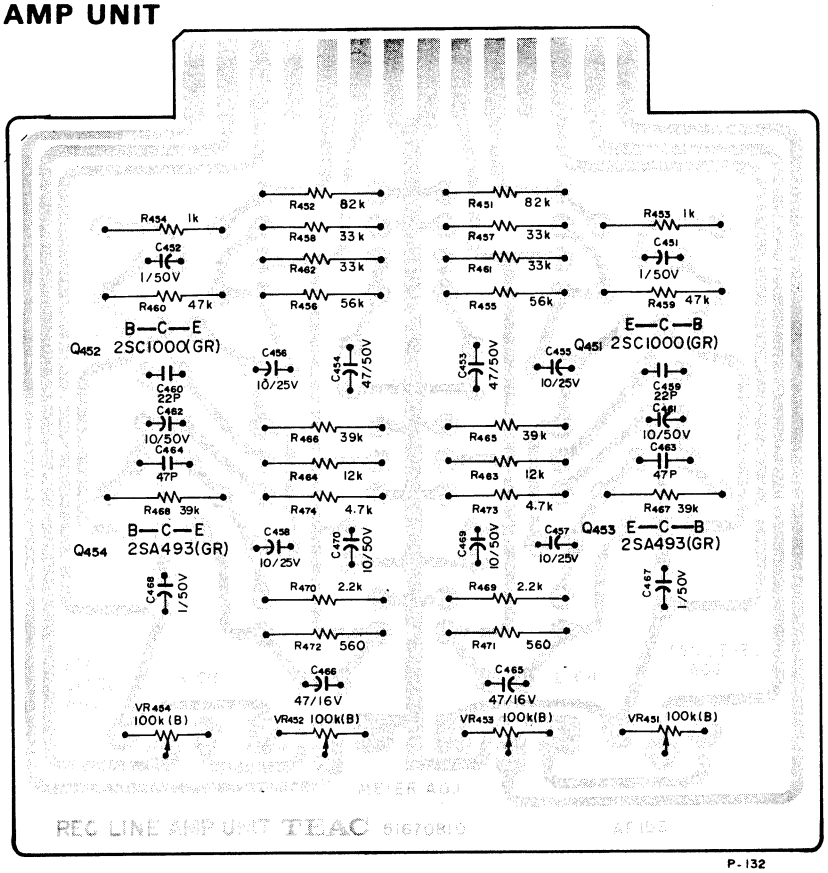
Foil Side

II-4. MIC MIXING AMP UNIT



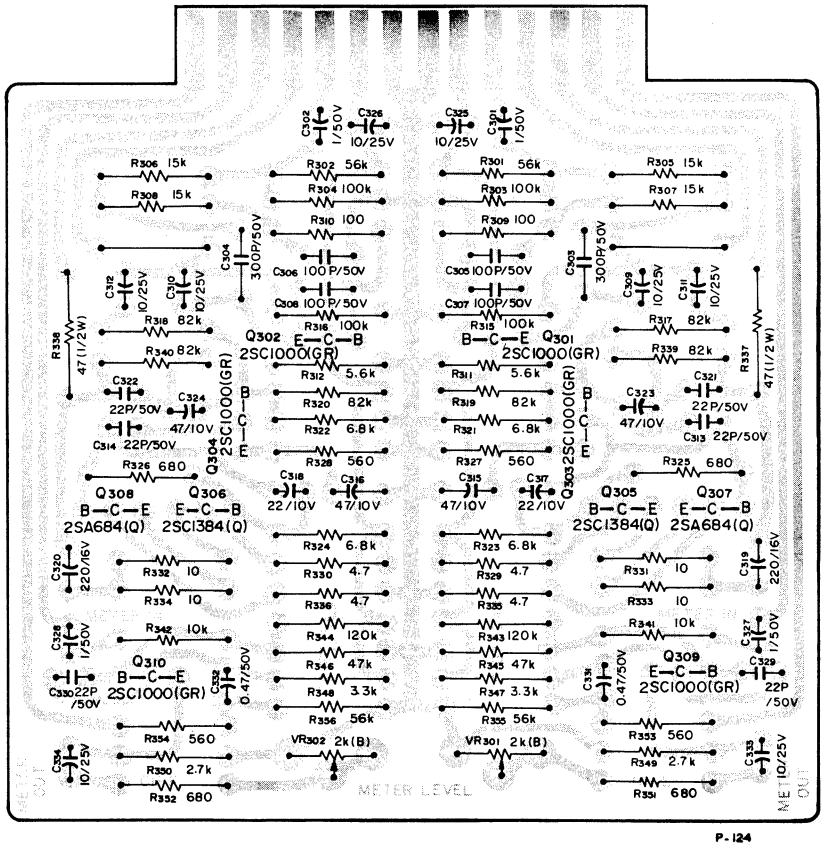
Foil Side

II-5. REC LINE AMP UNIT



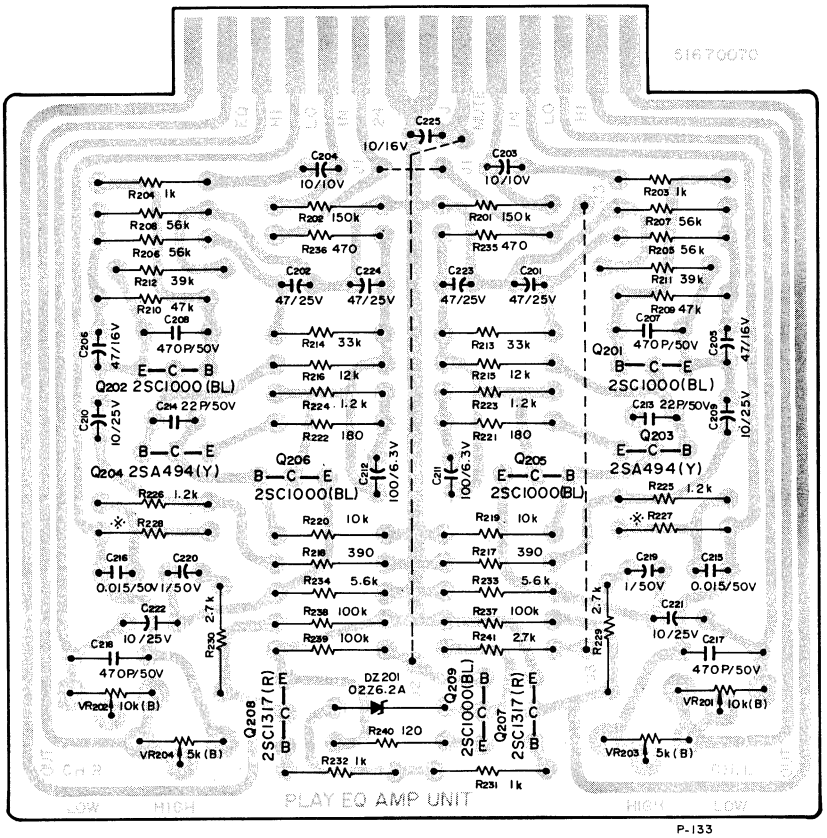
Foil Side

II-6. METER PHONE AMP UNIT



Foil Side

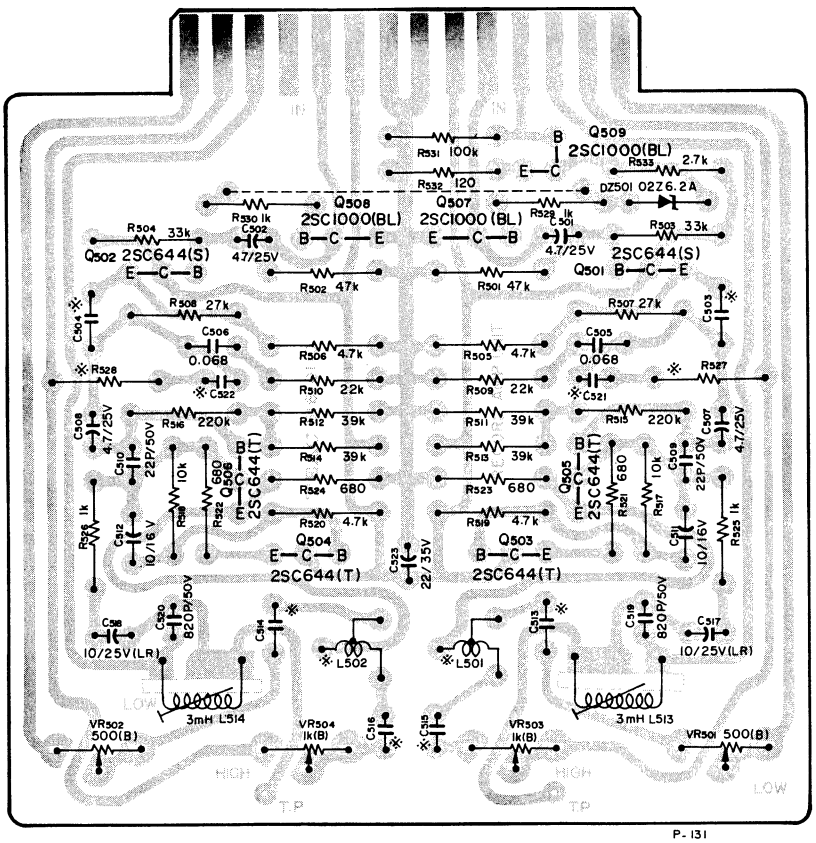
II-7. PLAY EQ AMP UNIT



	2T	4T
R227/R228	270kΩ	180kΩ

Foil Side

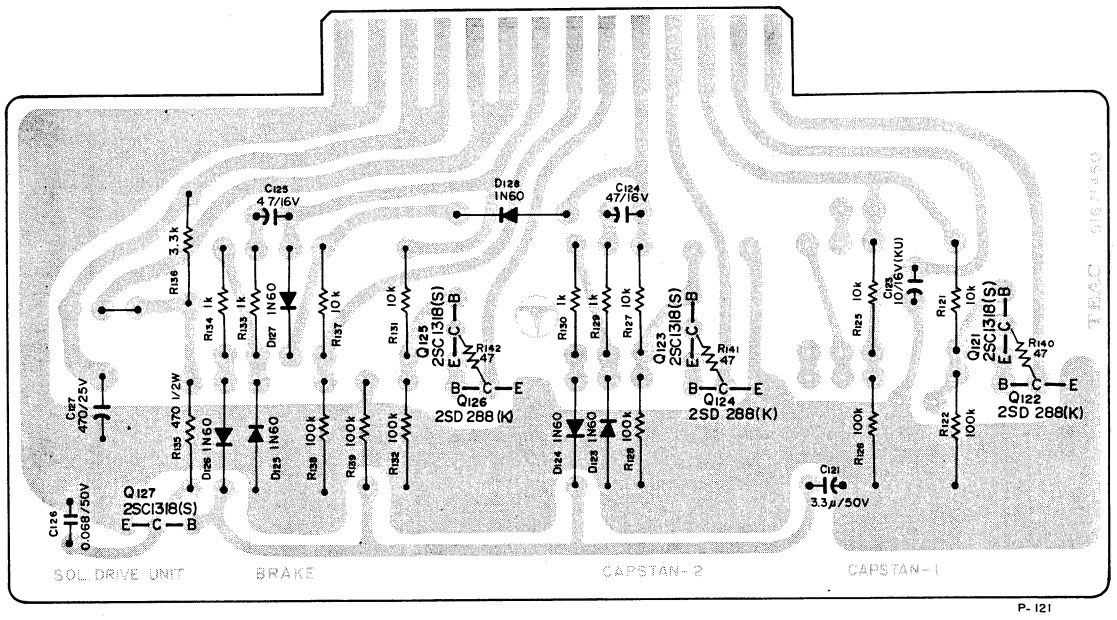
II-8. RECORD AMP UNIT



	2T	4T
C503/C504	100pF/50V	330pF/50V
C513/C514	0.027μF/50V	0.033μF/50V
C515/C516	0.0056μF/50V	0.012μF/50V
C521/C522	0.0015μF/50V	.....
R527/R528	27kΩ	.....
L501/L502	0.3/4.5mH	1.5/2.4mH

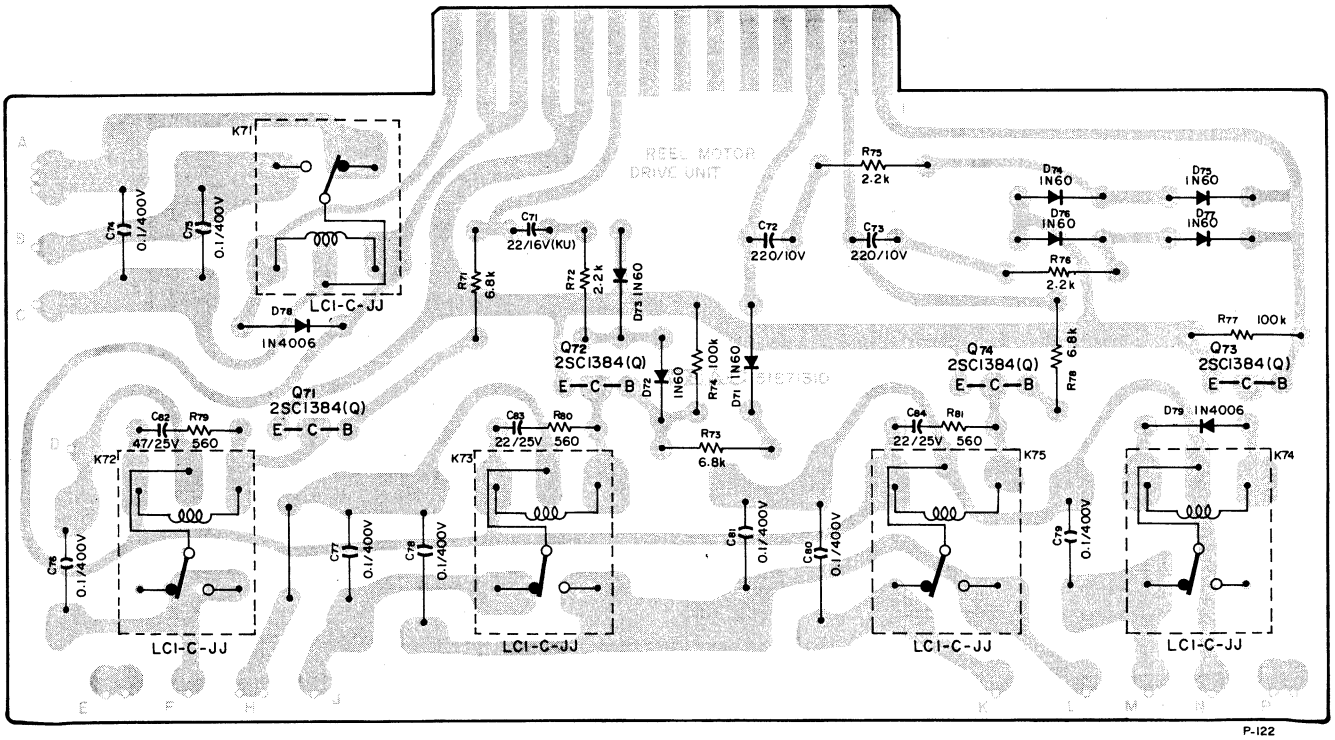
Foil Side

II-9. SOLENOID DRIVE UNIT



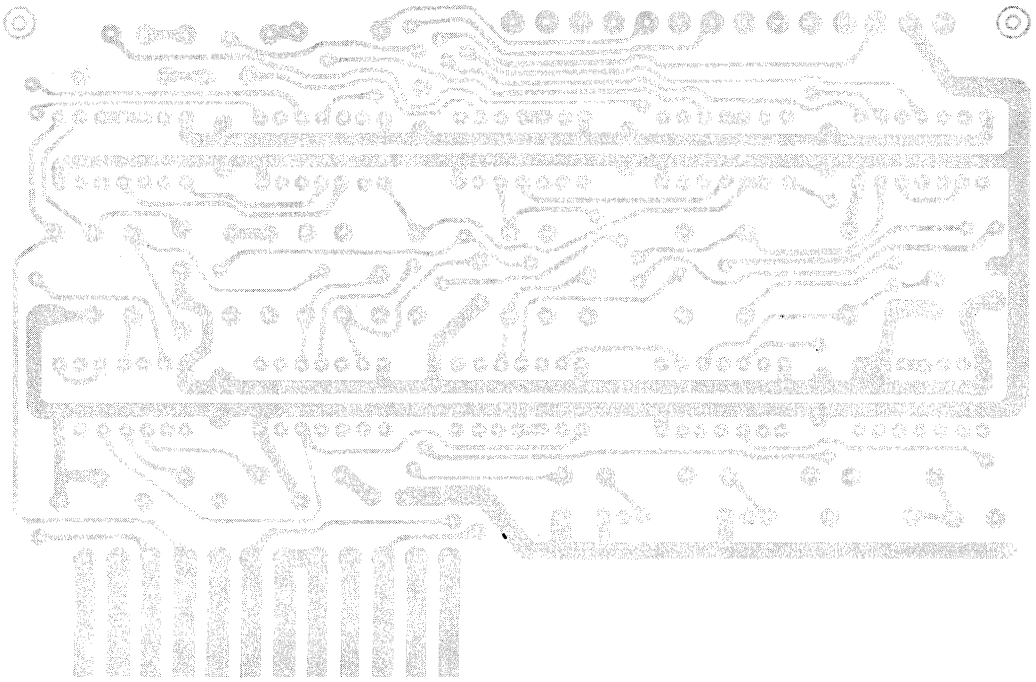
Foil Side

II-10. REEL MOTOR DRIVE UNIT

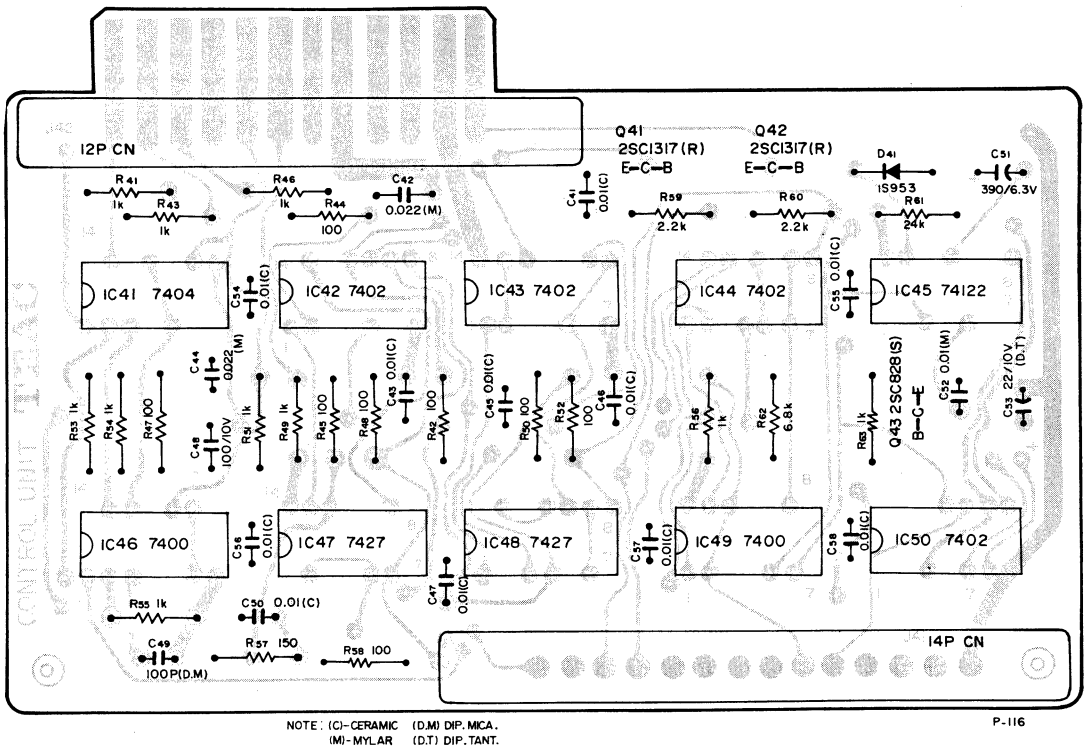


Foil Side

II-11. CONTROL UNIT



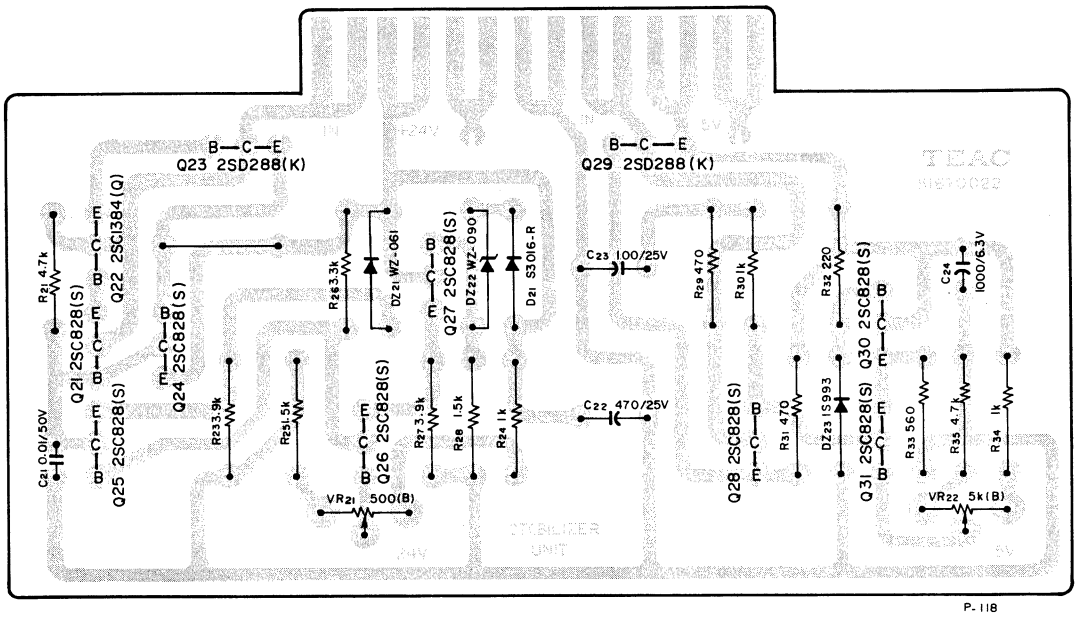
Foil Side



NOTE : (C)-CERAMIC (D.M) DIP. MICA.
(M)-MYLAR (D.T) DIP. TANT.

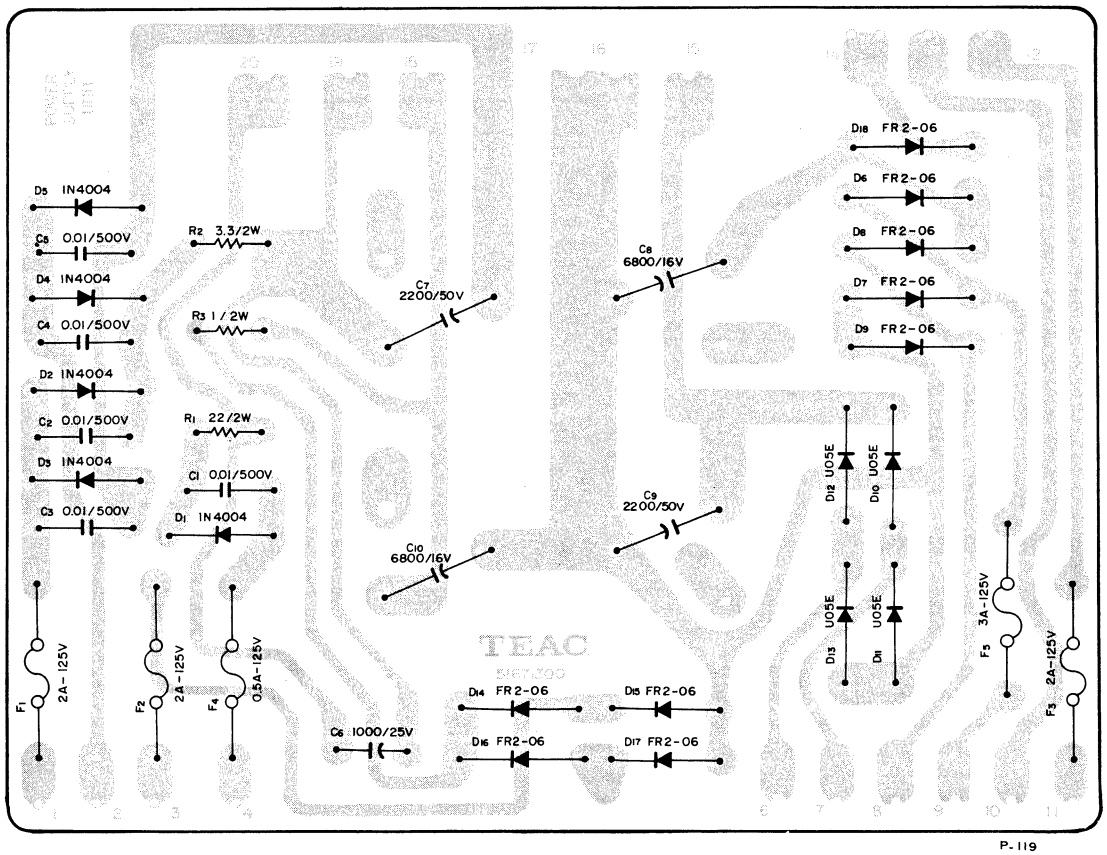
Component Side

II-12. STABILIZER UNIT



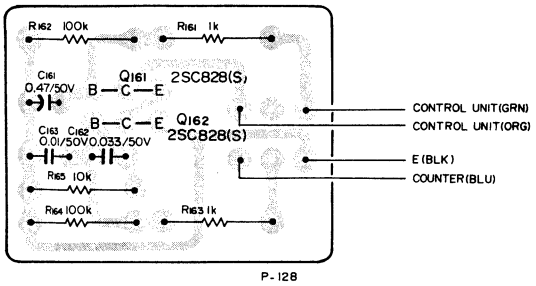
Foil Side

II-13. POWER SUPPLY UNIT



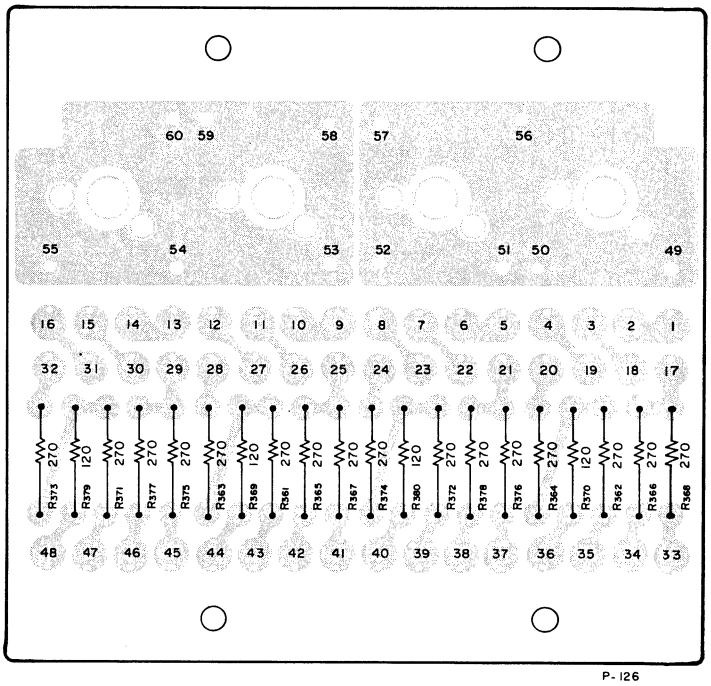
Foil Side

II-14. REWIND STOP UNIT



Foil Side

II-15. MIC. TRANSFORMER



Foil Side

I-2. CENTER BASE SECTION (Exploded Rear View)

(Continued from page 5.)

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2-59	50448611	Pushbutton Assy, Transport; B	
2-60	55507320	Retainer, PB Panel	
2-61	55541230	Retainer, PB Panel; B	
2-62	51670200	Board, Terminal; A	
2-63	51681600	PC Bd. Assy, Delay Signal Unit	
2-64	55541860	Angle, PC Board	
2-65	51681622	PC Bd. Assy, CONTROL UNIT	
2-66	51670250	PC Board, Terminal; B	
2-67	50436560	Plug, Multi-; 11P	
2-68	50125590	Thrust Bearing, Fiber	
2-69	51680660	PC Bd. Assy, Uniform Wind Unit	4T

I-4. AMPLIFIER SECTION

(Continued from page 9.)

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
4-57	55507400	Bracket, VU Meter	
4-58	55507390	Seal, Switch Masking	
4-59	55500790	Boot, Control Switch	
4-60	51680850	PC Bd. Assy; Switch Mounting (A), A	4T
	51680970	PC Bd. Assy; Switch Mounting (A), B	2T
4-61	51680980	PC Bd. Assy; Switch Mounting (B), A	
4-62	50430350	Plug, 1P Male	
4-63	50430360	Plug, 1P Female	
4-64	50436650	Plug, 3P Male	
4-65	50438420	Socket, 3P Female	

II. PC BOARD SECTION (Parts List)

II-1. PLAY LINE AMP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680780	PC Bd. Assy, A
	51670780	PC Board
	51670120	PC Board, Coil Mtg. (× 2)
TRANSISTORS		
Q251, Q252	50424100	2SC1000-GR
Q253, Q254	50424890	2SA493-GR
Q255, Q256	50424100	2SC1000-GR
CARBON RESISTORS		
All resistors are rated 5% tolerance and 1/4 watt.		
R251, R252	50573300	100 kΩ
R253, R254	50572820	1 kΩ
R255, R256	50573240	56 kΩ
R257, R258	50573180	33 kΩ
R259, R260	50573220	47 kΩ
R261, R262	50573180	33 kΩ
R263, R264	50573080	12 kΩ
R265, R266	50573200	39 kΩ
R267, R268	50573200	39 kΩ
R269, R270	50572740	470 Ω
R271, R272	50572760	560 Ω
R273, R274	50572980	4.7 kΩ
R275, R276	50573220	47 kΩ
R277, R278	50573160	27 kΩ
R279, R280	50573200	39 kΩ
R281, R282	50573300	100 kΩ
R283, R284	50573120	18 kΩ
R285, R286	50573120	18 kΩ
R287, R288	50572580	100 Ω
R289, R290	50573060	10 kΩ
R291, R292	50573220	47 kΩ
R293, R294	50572820	1 kΩ

CAPACITORS				
C251, C252	50554540	Elec.	1μF	50V
C253, C254	50555550	Elec.	47μF	50V
C255, C256	50555540	Elec.	47μF	10V
C257, C258	50555540	Elec.	47μF	10V
C259, C260	50543820	Dip, Mica	22pF	50V
C261, C262	50554350	Elec.	10μF	50V
C263, C264	50547420	Dip. Mica	47pF	50V
C265, C266	50548020	Mylar	0.01μF	50V
C267, C268	50554260	Elec.	33μF	16V
C269, C270	50554350	Elec.	10μF	50V
C271, C272	50554540	Elec.	1μF	50V
C273, C274	50547370	Dip. Mica	270pF	50V
C275, C276	50547440	Dip. Mica	100pF	50V
C277, C278	50547440	Dip. Mica	100pF	50V
C279, C280	50554350	Elec.	10μF	50V
C281, C282	50554540	Elec.	1μF	50V
VARIABLE RESISTORS				
VR251, VR252	50534210	Semi-fixed, 5 kΩ-B		
COILS				
L251, L252	50566640	Choke, 220μH		

II-2. AMP STABILIZER UNIT

REF. NO.	PARTS NO.	DESCRIPTION			
	51680831	PC Bd, Assy			
	51670830	PC Board			
TRANSISTORS					
Q601	50424750	2SC1384-Q			
Q602	50425270	2SD288-K			
Q603	50423500	2SC734-Y			
ZENER DIODES					
D601	50425150	WZ-090			
D602	50425260	XZ-175			
RESISTORS					
R601	50572480	Carbon	39 Ω	1/4W	5%
R602, R604	50572340	Carbon	10 Ω	1/4W	5%
R603	50572920	Carbon	2.7 kΩ	1/4W	5%
R605	50520360	Cement	10 Ω	3W	
R606, R607	50572840	Carbon	1.2 kΩ	1/4W	5%
R608	50572980	Carbon	4.7 kΩ	1/4W	5%
R609	50572940	Carbon	3.3 kΩ	1/4W	5%
R610	50572900	Carbon	2.2 kΩ	1/4W	5%
R611	50526420	Wire Wound	39 Ω	1W	

ELEC. CAPACITORS			
C601 ~ C603	50555640	100μF	63V
C604	50554070	100μF	50V
C605, C606	50555610	220μF	50V
C607, C608	50554630	100μF	35V
C609	50554380	220μF	35V
MISCELLANEOUS			
	50333040	Heat Sink (for 2SC1384)	
	55504320	Heat Sink, A	
	50332910	Sheet, Insul.; for 2SD235	

II-3. BIAS OSC UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680821	PC Bd, Assy
	51670820	PC Board
TRANSISTORS		
Q551, Q552	50424160	2SC1226-A(P)
Q553	50424750	2SC1384-Q
Q554	50424160	2SC1226-A(P)
DIODE		
D551	50422940	1N4006

REF. NO.	PARTS NO.	DESCRIPTION
		CARBON RESISTORS
R551, R552	50574980	4.7 kΩ 1/2W 5%
R553	50517860	2.2 kΩ 1/2W
R554	50572720	390 Ω 1/4W 5%
R555, R556	50574460	33 Ω 1/4W 5%
R557	50573140	22 kΩ 1/4W 5%
R558	50572940	3.3 kΩ 1/4W 5%
R559	50572780	680 Ω 1/4W 5%
		CAPACITORS
C551	50548870	Mylar 0.015μF 50V
C552, C553	50548910	Mylar 0.0047μF 50V
C554	51700160	Mylar .0.033μF 150V
C555	50544040	Mica 4200pF 250V 5%
C556	50554970	Elec. 0.47μF 50V
C557	50554720	Elec. 22μF 10V
		TRIMMERS
VC551, VC552	50547110	Trimmer Cap., 80pF Max.
VR551, VR552	50534210	Semi-fixed Res., 5 kΩ-B
		COILS
L551	50566720	Choke, 2.2mH
L552	50566581	Dummy, 3mH
T551	50563550	Bias Osc.
		RELAY
K551	50611230	DPDT,DC 24V 1740 Ω
		MISCELLANEOUS
	51670120	PC Board, Coil Mounting
	50333000	Plate Nut, B
	50332990	Fiber Sheet
	50330940	Washer, Insulating

II-4. MIC MIXING AMP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680801	PC Bd. Assy, A
	51670801	PC Board
		TRANSISTORS
Q401, Q402	50424100	2SC1000-GR
Q403, Q404	50424890	2SA493-GR
Q405, Q406	50424100	2SC1000-GR
		CARBON RESISTORS
		All resistors are rated 5% tolerance and 1/4 watt.
R401, R402	50573520	820 kΩ
R403, R404	50573260	68 kΩ
R405, R406	50572580	100 Ω
R407, R408	50573000	5.6 kΩ
R409, R410	50573040	8.2 kΩ
R411, R412	50572800	820 Ω
R413, R414	50573280	82 kΩ
R415	50573240	56 kΩ
R416	50572820	1 kΩ
R417	50573280	82 kΩ
R418	50573120	18 kΩ
R419	50573380	220 kΩ
R420	50572980	4.7 kΩ
R421	50572880	1.8 kΩ
R422	50572880	1.8 kΩ
R423	50573280	82 kΩ
R424	50573120	18 kΩ
R425	50573380	220 kΩ
R426	50572820	1 kΩ
R427	50573240	56 kΩ
R428	50573280	82 kΩ
R429	50572700	330 Ω
		CAPACITORS
C401, C402	50546703	Dip. Tant. 1μF 35V
C403, C404	50548320	Mylar 0.001μF 50V
C405, C406	50543820	Dip. Mica 22pF 50V
C407, C408	50547450	Dip. Mica 220pF 50V
C409, C410	50554540	Elec. 1μF 50V
C411	50554540	Elec, 1μF 50V
C412, C413	50548320	Mylar 0.001μF 50V
C414	50554540	Elec. 1μF 50V
C415	50554970	Elec. 0.47μF 50V
C416	50554070	Elec. 100μF 50V
		VARIABLE RESISTORS
VR401, VR402	50534230	Semi-fixed, 100 kΩ-B

II-5. REC LINE AMP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680811	PC Bd. Assy, A
	51670810	PC Board
		TRANSISTORS
Q451, Q452	50424100	2SC1000-GR
Q453,Q454	50424890	2SA493-GR
		CARBON RESISTORS
		All resistors are rated 5% tolerance and 1/4 watt.
R451, R452	50573280	82 kΩ
R453, R454	50572820	1 kΩ
R455, R456	50573240	56 kΩ
R457, R458	50573180	33 kΩ
R459, R460	50573220	47 kΩ
R461, R462	50573180	33 kΩ
R463, R464	50573080	12 kΩ
R465, R466	50573200	39 kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R467, R468	50573200	39 kΩ
R469, R470	50572900	2.2 kΩ
R471, R472	50572760	560 Ω
R473, R474	50572980	4.7 kΩ

CAPACITORS

C451, C452	50554540	Elec.	1μF	50V
C453, C454	50555550	Elec.	47μF	50V
C455, C456	50554040	Elec.	10μF	25V
C457, C458	50554040	Elec.	10μF	25V
C459, C460	50543820	Dip. Mica	22pF	50V
C461, C462	50554350	Elec.	10μF	50V
C463, C464	50547420	Dip. Mica	47pF	50V
C465, C466	50554010	Elec.	47μF	16V
C467, C468	50554540	Elec.	1μF	50V
C469, C470	50554350	Elec.	10μF	50V

VARIABLE RESISTORS

VR451, VR452	50534230	Semi-fixed, 100 kΩ-B
VR453, VR454	50534230	Semi-fixed, 100 kΩ-B

II-6. METER PHONE AMP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680790	PC Bd. Assy, A
	51670790	PC Board

TRANSISTORS

Q301, Q302	50424100	2SC1000-GR
Q303, Q304	50424100	2SC1000-GR
Q305, Q306	50424750	2SC1384-Q
Q307, Q308	50424900	2SA684-Q
Q309,Q310	50424100	2SC1000-GR

CARBON RESISTORS

All resistors are rated 5% tolerance and 1/4 watt unless otherwise noted.

R301, R302	50573240	56 kΩ
R303, R304	50573300	100 kΩ
R305, R306	50573100	15 KΩ
R307, R308	50573100	15 kΩ
R309, R310	50572580	100 Ω
R311, R312	50573000	5.6 kΩ
R313, R314		(not used)
R315, R316	50573300	100 kΩ
R317, R318	50573280	82 kΩ
R319, R320	50573280	82 kΩ
R321, R322	50573020	6.8 kΩ
R323, R324	50573020	6.8 kΩ
R325, R326	50572780	680 Ω
R327, R328	50572760	560 Ω
R329, R330	50572260	4.7 Ω
R331, R332	50572340	10 Ω
R333, R334	50572340	10 Ω
R335, R336	50572260	4.7 Ω
R337, R338	50574500	47 Ω 1/2W
R339, R340	50573280	82 kΩ
R341, R342	50573060	10 kΩ
R343, R344	50573320	120 kΩ
R345, R346	50573220	47 kΩ
R347, R348	50572940	3.3 kΩ
R349, R350	50572920	2.7 kΩ
R351, R352	50572780	680 Ω
R353, R354	50572760	560 Ω
R355, R356	50573240	56 kΩ

CAPACITORS

C301, C302	50554540	Elec.	1μF	50V
C303, C304	50547360	Dip. Mica	300pF	50V
C305, C306	50547440	Dip. Mica	100pF	50V
C307, C308	50547440	Dip. Mica	100pF	50V
C309, C310	50554040	Elec.	10μF	25V
C311, C312	50554040	Elec.	10μF	25V
C313, C314	50543820	Dip. Mica	22pF	50V
C315, C316	50555540	Elec.	47μF	10V
C317, C318	50554720	Elec.	22μF	10V
C319, C320	50554390	Elec.	220μF	16V
C321, C322	50543820	Dip. Mica	22pF	50V
C323, C324	50555540	Elec.	47μF	10V
C325, C326	50554040	Elec.	10μF	25V
C327, C328	50554540	Elec.	1μF	50V
C329, C330	50543820	Dip. Mica	22pF	50V
C331, C332	50554970	Elec.	0.47μF	50V
C333, C334	50554040	Elec.	10μ	25V

VARIABLE RESISTORS

VR301, VR302	50534260	2 kΩ-B

II-7. PLAY EQ AMP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680901	PC Bd. Assy, C (4T)
	51681241	PC Bd. Assy, D (2T)
	51670071	PC Board

TRANSISTORS

Q201, Q202	50424340	2SC1000-BL
Q203, Q204	50423650	2SA494-Y
Q205, Q206	50424340	2SC1000-BL
Q207, Q208	50424670	2SC1317-R
Q209	50424340	2SC1000-BL

ZENER DIODES

DZ201	50422580	02Z6.2A

CARBON RESISTORS

All resistors are rated 5% tolerance and 1/4 watt.

R201, R202	50573340	150 kΩ
R203, R204	50572820	1 kΩ
R205, R206	50573240	56 kΩ
R207, R208	50573240	56 kΩ
R209, R210	50573220	47 kΩ
R211, R212	50573200	39 kΩ
R213, R214	50573180	33 kΩ
R215, R216	50573080	12 kΩ

REF. NO.	PARTS NO.	DESCRIPTION
R217, R218	50572720	390 Ω
R219, R220	50573060	10 kΩ
R221, R222	50572680	180 Ω
R223, R224	50572840	1.2 kΩ
R225, R226	50572840	1.2 kΩ
R227, R228	50573360	180 kΩ (4T)
	50573400	270 kΩ (2T)
R229, R230	50572920	2.7 kΩ
R231, R232	50572820	1 kΩ
R233, R234	50573000	5.6 kΩ
R235, R236	50572740	470 Ω
R237, R238	50573300	100 kΩ
R239	50573300	100 kΩ
R240	50572600	120 Ω
R241	50572920	2.7 kΩ

CAPACITORS

C201, C202	50554490	Elec.	47μF	25V	
C203, C204	50546190	Tant.	10μF	10V	
C205, C206	50554010	Elec.	47μF	16V	
C207, C208	50547560	Dip. Mica	470pF	50V	
C209, C210	51700820	Elec.	10μF	25V	(LR)
C211, C212	50554230	Elec.	100μF	6.3V	
C213, C214	50543820	Dip. Mica	22pF	50V	
C215, C216	50548960	Mylar	0.015μF	50V	5%
C217, C218	50547560	Dip. Mica	470pF	50V	
C219, C220	50554540	Elec.	1μF	50V	
C221, C222	50554040	Elec.	10μF	25V	
C223, C224	50554490	Elec.	47μF	25V	
C225	50549770	Elec.	10μF	16V	(KU)

VARIABLE RESISTORS

VR201, VR202	50534220	Semi-fixed,	10 kΩ-B
VR203, VR204	50534210	Semi-fixed,	5 kΩ-B

II-8. RECORD AMP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680881	PC Bd. Assy, A (4T)
	51680891	PC Bd. Assy, B (2T)
	51670110	PC Board

TRANSISTORS

Q501, Q502	50423590	2SC644-S
Q503, Q504	50423770	2SC644-T
Q505, Q506	50423770	2SC644-T
Q507, Q508	50424340	2SC1000-BL
Q509	50424340	2SC1000-BL

ZENER DIODE

DZ501	50422580	02Z6.2A

CARBON RESISTORS

All resistors are rated 5% tolerance and 1/4 watt.

R501, R502	50573220	47 kΩ
R503, R504	50573180	33 kΩ
R505, R506	50572980	4.7 kΩ
R507, R508	50573160	27 kΩ
R509, R510	50573140	22 kΩ
R511, R512	50573200	39 kΩ
R513, R514	50573200	39 kΩ
R515, R516	50573380	220 kΩ
R517, R518	50573060	10 kΩ
R519, R520	50572980	4.7 kΩ
R521, R522	50572780	680 Ω
R523, R524	50572780	680 Ω
R525, R526	50572800	1 kΩ
R527, R528	50573160	27 kΩ (2T only)
R529, R530	50572800	1 kΩ
R531	50573300	100 kΩ
R532	50572600	120 Ω
R533	50572920	2.7 kΩ

CAPACITORS

C501, C502	50554530	Elec.	4.7μF	25V	
C503, C504	50547460	Dip. Mica	330pF	50V	(4T)
	50547440	Dip. Mica	100pF	50V	(2T)
C505, C506	50549260	Mylar	0.068μF	50V	5%
C507, C508	50554530	Elec.	4.7μF	25V	
C509, C510	50543820	Dip. Mica	22pF	50V	
C511, C512	50554050	Elec.	10μF	16V	
C513, C514	50549000	Mylar	0.033μF	50V	5% (4T)
	50548990	Mylar	0.027μF	50V	5% (2T)
C515, C516	50548950	Mylar	0.012μF	50V	5%(4T)
	50548920	Mylar	0.0056μF	50V	5% (2T)
C517, C518	51700820	Elec.	10μF	25V	(LR)
C519, C520	50543120	Polyst.	820pF	250V	
C521, C522	50548960	Mylar	0.0015μF	50V	5% (2T)
C523	50554900	Elec.	22μF	35V	

VARIABLE RESISTORS

VR501, VR502	50534190	Semi-fixed, 500 Ω-B
VR503, VR504	50534200	Semi-fixed, 1 kΩ-B

COILS

L501, L502	50566670	Record EQ. 1.5/2.4mH (4T)
	50566750	Record EQ. 0.3/4.5mH (2T)
L513, L514	50566300	Trap, 3mH

MISCELLANEOUS

	51670120	PC Board, Coil Mtg. (× 2)

II-9. SOLENOID DRIVE UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51681454	PC Bd. Assy
	51671450	PC Board
Q121, Q123	50426250	Transistor, 2SC1318-S
Q122, Q124	50425270	Transistor, 2SD288-K
Q125	50426250	Transistor, 2SC1318-S
Q126	50425270	Transistor, 2SD288-K
Q127	50426250	Transistor, 2SC1318-S
D123-D128	50422130	Diode, 1N60

REF. NO.	PARTS NO.	DESCRIPTION			
R121, R125	50573060	Carbon	10 kΩ	1/4W	5%
R122, R126	50573300	Carbon	100 kΩ	1/4W	5%
R127, R131	50573060	Carbon	10 kΩ	1/4W	5%
R128, R132	50573300	Carbon	100 kΩ	1/4W	5%
R129, R130	50572820	Carbon	1 kΩ	1/4W	5%
R133, R134	50572820	Carbon	1 kΩ	1/4W	5%
R135	50574740	Carbon	470 Ω	1/2W	5%
R136	50572940	Carbon	3.3 kΩ	1/2W	5%
R137	50573060	Carbon	10 kΩ	1/2W	5%
R138, R139	50573300	Carbon	100 kΩ	1/2W	5%
R140, R141	50572500	Carbon	47 Ω	1/4W	5%
R142	50572500	Carbon	47 Ω	1/4W	5%
C121	50555730	Elec.	3.3μF	50V	
C123	50549770	Elec.	10μF	16V (KU)	
C124, C125	50554010	Elec.	47μF	16V	
C126	50548540	Mylar	0.068μF	50V	10%
C127	50554420	Elec.	470μF	25V	

II-10. REEL MOTOR DRIVE UNIT

REF. NO.	PARTS NO.	DESCRIPTION			
	51681311	PC Bd. Assy			
	51671311	PC Board			
Q71 ~ Q74	50424750	Transistor, 2SC1384-Q			
D71 ~ D77	50422130	Diode, 1N60			
D78, D79	50422940	Diode, 1N4006			
R71	50573020	Carbon	6.8 kΩ	1/4W	5%
R72	50572900	Carbon	2.2 kΩ	1/4W	5%
R73	50573020	Carbon	6.8 kΩ	1/4W	5%
R74	50573300	Carbon	100 kΩ	1/4W	5%
R75, R76	50572900	Carbon	2.2 kΩ	1/4W	5%
R77	50573300	Carbon	100 kΩ	1/4W	5%
R79 ~ R81	50572760	Carbon	560 Ω	1/4W	5%
C71	50549780	Elec.	22μF	16V (KU)	
C72, C73	50554910	Elec.	220μF	10V	
C74 ~ C81	50549920	Metalized Mylar	0.1μF	400V AC	
C82	50554490	Elec.	47μF	25V	
C83, C84	50554950	Elec.	22μF	25V	
K71 ~ K75	50611270	Relay, DC 24V			

II-11. CONTROL UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51681621	PC Bd. Assy
	51671470	PC Board
	IC's	
IC41	50427250	IC, SN7404N
IC42 ~ IC44	50427130	IC, SN7402N
IC45	50427270	IC, SN74122N
IC46	50427120	IC, SN7400N
IC47, IC48	50427260	IC, SN7427N
IC49	50427120	IC, SN7400N
IC50	50427130	IC, SN7402N
	TRANSISTORS	
Q41, Q42	50424670	Transistor, 2SC1317-R
Q43	50424600	Transistor, 2SC828-S
	DIODE	
D41	50425360	1S953
	CARBON RESISTORS	
R41, R43	51804820	1 kΩ 1/3W
R42	51804580	100 Ω 1/3W
R44, R45	51804580	100 Ω 1/3W
R46, R49	51804820	1 kΩ 1/3W
R47, R48	51804580	100 Ω 1/3W
R50, R52	51804580	100 Ω 1/3W
R51	51804820	1 kΩ 1/3W
R53 ~ R56	51804820	1 kΩ 1/3W
R57	51804620	150 Ω 1/3W
R58	51804580	100 Ω 1/3W
R59, R60	51804900	2.2 kΩ 1/3W
R61	51805150	24 kΩ 1/3W
R62	51805020	6.8 kΩ 1/3W
R63	51804820	1 kΩ 1/3W
	CAPACITORS	
C41, C43	50542040	Ceramic 0.01μF 50V
C42, C44	50548290	Mylar 0.022μF 50V
C45, C46	50542040	Ceramic 0.01μF 50V
C47, C50	50542040	Ceramic 0.01μF 50V
C48	50554570	Elec. 100μF 10V
C49	50547440	Dip. Mica 100pF 50V
C51	51700700	Elec. 390μF 6.3V
C52	50548020	Mylar 0.01μF 50V
C53	50546501	Dip. Tant. 22μF 10V
C54 ~ C58	50542040	Ceramic 0.01μF 50V
	MISCELLANEOUS	
J41	50438370	Connector, PC; 14P
J42	50438360	Connector, PC; 12P

II-12. STABILIZER UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51681250	PC Bd. Assy
	51670022	PC Board
	TRANSISTORS	
Q21	50424600	2SC828-S
Q22	50424750	2SC1384-Q

REF. NO.	PARTS NO.	DESCRIPTION
Q23	50425270	2SD288-K
Q24 ~ Q28	50424600	2SC828-S
Q29	50425270	2SD288-K
Q30, Q31	50424600	2SC828-S
		DIODES
D21	50422440	S3016-R
DZ-21	50425140	Zener, WZ-061
DZ-22	50425150	Zener, WZ-090
DZ-23	50425160	Zener, 1S993
		CARBON RESISTORS
R21	50572980	4.7 kΩ 1/4W 5%
R23	50572960	3.9 kΩ 1/4W 5%
R24	50572820	1 kΩ 1/4W 5%
R25	50572860	1.5 kΩ 1/4W 5%
R26	50572940	3.3 kΩ 1/4W 5%
R27	50572960	3.9 kΩ 1/4W 5%
R28	50572860	1.5 kΩ 1/4W 5%
R29	50572740	470 Ω 1/4W 5%
R30	50572820	1 kΩ 1/4W 5%
R31	50572740	470 Ω 1/4W 5%
R32	50572660	220 Ω 1/4W 5%
R33	50572760	560 Ω 1/4W 5%
R34	50572820	1 kΩ 1/4W 5%
R35	50572980	4.7 kΩ 1/4W 5%
		CAPACITORS
C21	50548020	Mylar 0.01μF 50V
C22	50554420	Elec. 470μF 25V
C23	50554170	Elec. 100μF 25V
C24	50554870	Elec. 1000μF 6.3V
		VARIABLE RESISTORS
VR21	50534190	Semi-fixed, 500 Ω-B
VR22	50534210	Semi-fixed, 5 kΩ-B
	55504580	Heat Sink, E
	50332950	Insulating Tube (2used)
	50332910	Insulating Sheet (2used)

II-13. POWER SUPPLY UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51671300	PC Board
D1 ~ D5	50422920	Diode, 1N4004
D6 ~ D9	50422360	Diode, FR2-06
D10 ~ D13	51430180	Diode, U05(E)
D14 ~ D18	50422360	Diode, FR2-06
R1	51806420	Wire Wound 22 Ω 2W
R2	51806220	Wire Wound 3.3 Ω 2W
R3	51806100	Wire Wound 1 Ω 2W
C1 ~ C5	50542230	Ceramic 0.01μF 500V
C6	50555580	Elec. 1000μF 25V
C7, C9	50555710	Elec. 2200μF 50V
C8, C10	50555720	Elec. 6800μF 16V
F1, F2, F3	50411360	Fuse, 2A-125V
F4	50411430	Fuse, 0.5A-125V
F5	50411420	Fuse, 3A-125V
	55507470	Holder, Capacitor; A

II-14. REWIND STOP UNIT

REF. NO.	PARTS NO.	DESCRIPTION
	51680670	PC Bd. Assy
	51670680	PC Board
Q161, Q162	50424600	Transistor, 2SC828-S
R161, R163	50572820	Carbon 1 kΩ 1/4W 5%
R162, R164	50573300	Carbon 100 kΩ 1/4W 5%
R165	50573060	Carbon 10 kΩ 1/4W 5%
C161	50554970	Elec. 0.47μF 50V
C162	50548240	Mylar 0.033μF 50V 10%
C163	50542040	Ceramic 0.01μF 50V

II-15. MIC. TRANSFORMER

REF. NO.	PARTS NO.	DESCRIPTION
	51680840	PC Bd. Assy
	51670840	PC Board
R361 ~ R368	50572680	Carbon 270 Ω 1/4W 5%
R369, R370	50572600	Carbon 120 Ω 1/4W 5%
R371 ~ R378	50572680	Carbon 270 Ω 1/4W 5%
R379, R380	50572600	Carbon 120 Ω 1/4W 5%
T361 ~ T364	57245850	Transformer, Microphone

TEAC CORPORATION 3-7-3 NAKA-CHO, MUSASHINO, TOKYO PHONE: (0422) 53-1111

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TEAC TONBAND-ANLAGEN VERTRIEBS GmbH 6200 WIESBADEN-ERBENHEIM, EGERSTRASSE 2, WEST GERMANY PHONE: (06121) 71225 ~ 8

TEAC HONGKONG LIMITED FLAT 78, PORTLAND HOUSE, 7TH FLOOR, BLOCK C, No. 41-D, MA TAU WEI ROAD, KOWLOON, HONG KONG. PHONE: 3659071

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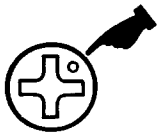
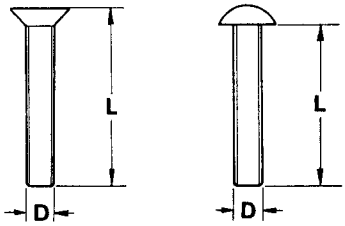
ASSEMBLING HARDWARE CODING LIST

All screws conform to ISO standards, and have cross-recessed heads, unless otherwise noted.
ISO screws have the head inscribed with a point as in the figure to the right.



FOR EXAMPLE:

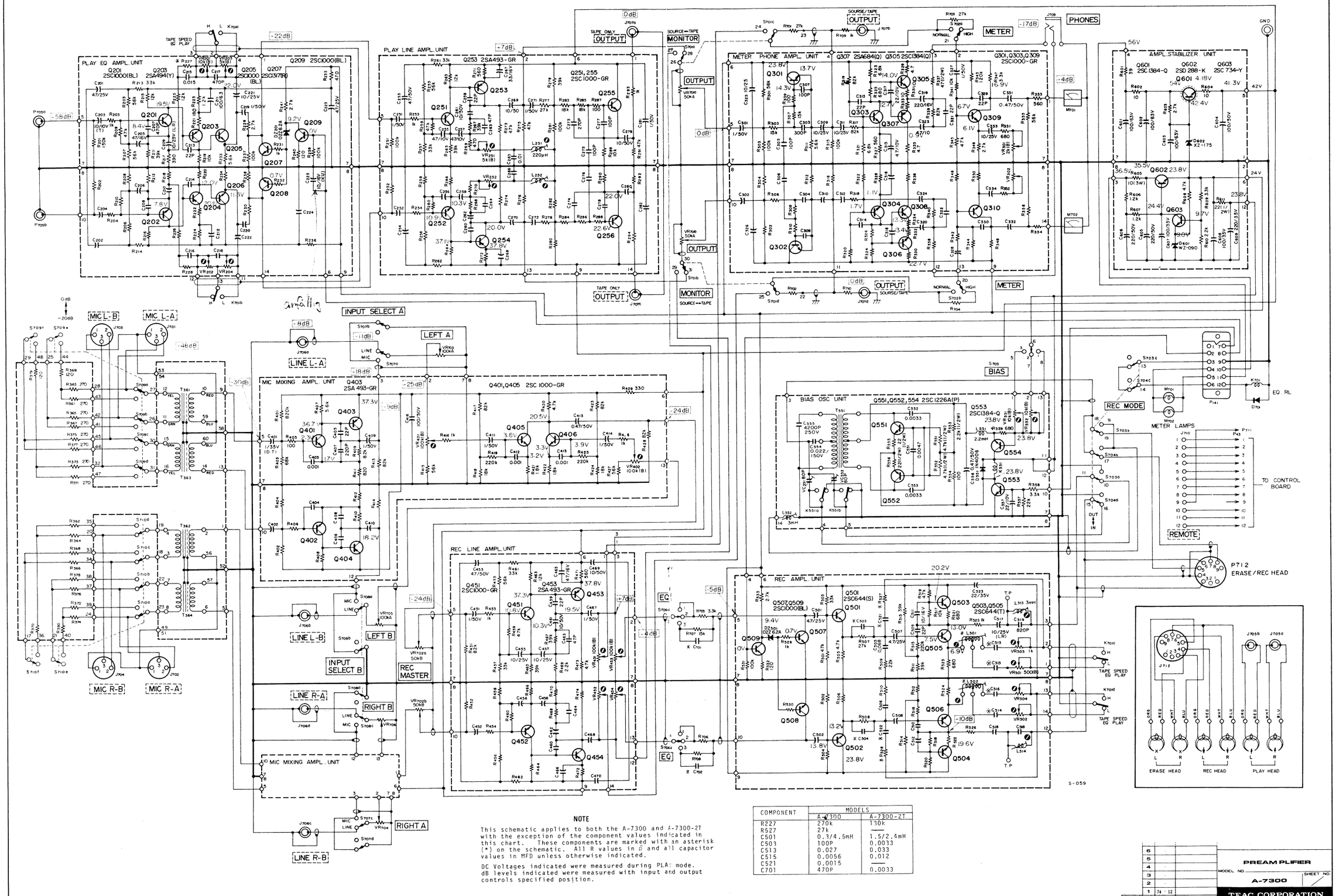
B M3 x 6
- Length in mm (L)
- Diameter in mm (D)
- Type of Head



	Code	Full Name	Type
MACHINE SCREW	R	Round Head Screw	
	P	Pan Head Screw	
	T	Stove Head Screw (Truss)	
	B	Binding Head Screw	
	F	Flat Countersunk Head Screw	
	O	Oval Countersunk Head Screw	
WOOD SCREW	RW	Round Head Wood Screw	
	FW	Flat Countersunk Wood Screw	
	OW	Oval Countersunk Wood Screw	
SEMS SCREW	BSA	Binding Head SEMS Screw(A Type)	
	BSB	Binding Head SEMS Screw(B Type)	
	BSF	Binding Head SEMS Screw(F Type)	
	PSA	Pan Head SEMS Screw(A Type)	
	PSB	Pan Head SEMS Screw(B Type)	

	Code	Full Name	Type
TAPPING SCREW	BTA	Binding Head Tapping Screw(A Type)	
	BTB	Binding Head Tapping Screw(B Type)	
	RTA	Round Head Tapping Screw(A Type)	
	RTB	Round Head Tapping Screw(B Type)	
SETSCREW	SF	Hex Socket Setscrew(Flat Point)	
	SC	Hex Socket Setscrew(Cup Point)	
	SS	Slotted Socket Setscrew(Flat Point)	
WASHER	E	E-Ring (Retaining Washer)	
	W	Flat Washer (Plain)	
	SW	Lock Washer (Spring)	
	LWI	Lock Washer (Internal Teeth)	
	LWE	Lock Washer (External Teeth)	
	TW	Trim Washer (Countersunk)	
NUT	N	Hex Nut	

T-310



NOTE

This schematic applies to both the A-7300 and A-7300-2T with the exception of the component values indicated in this chart. These components are marked with an asterisk (*) on the schematic. All R values in Ω and all capacitor values in MFD unless otherwise indicated.

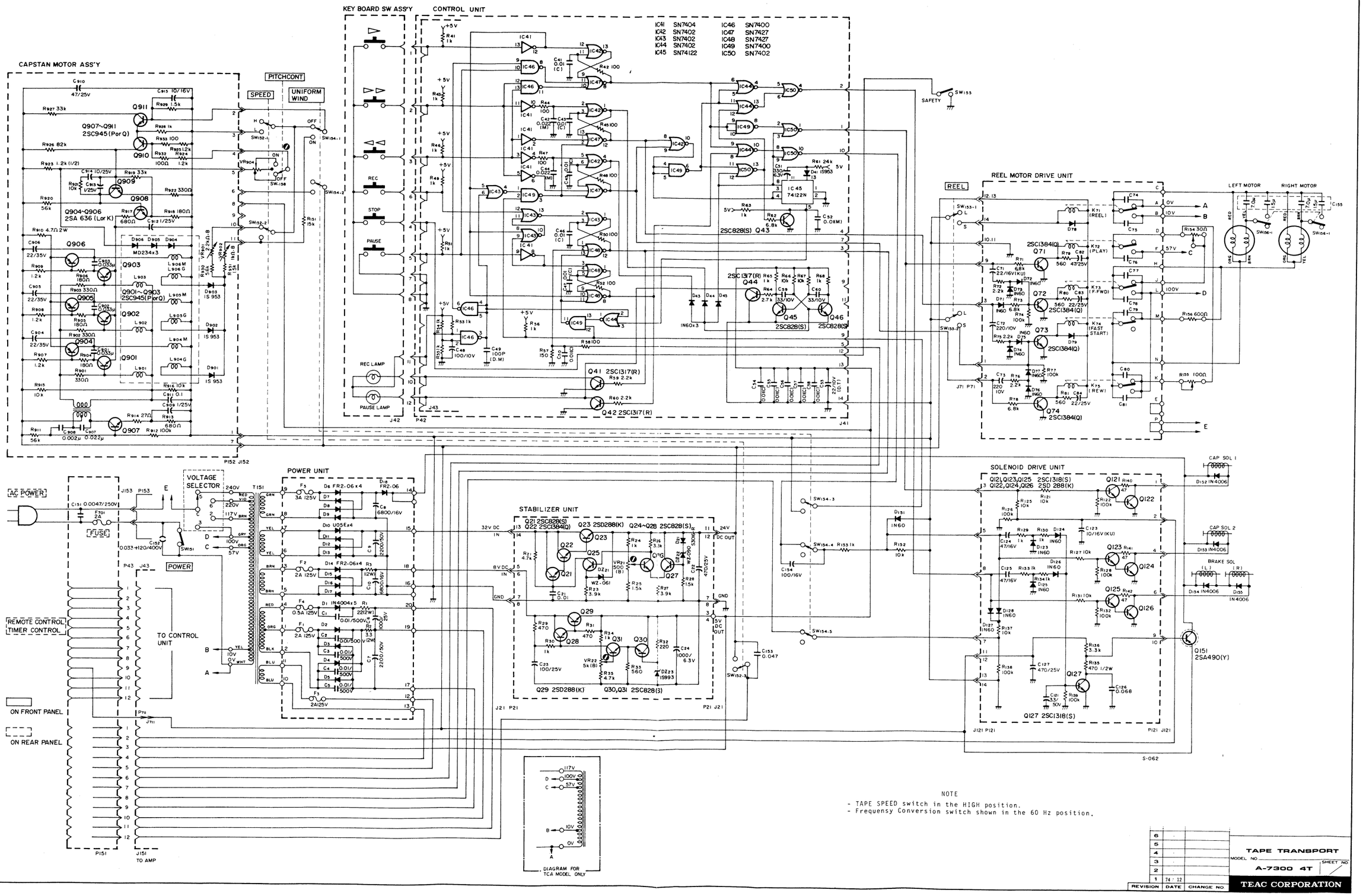
DC Voltages indicated were measured during PLAY mode. dB levels indicated were measured with input and output controls specified position.

COMPONENT	MODELS	
	A-7300	A-7300-2T
R227	270k	130k
R527	27k	—
C501	0.3/4.5mH	1.5/2.4mH
C503	100P	0.0033
C513	0.027	0.033
C515	0.0056	0.012
C521	0.0015	—
C701	470P	0.0033

S-059

REVISION	DATE	CHANGE NO
6		
5		
4		
3		
2		
1	74-12	

PREAMPLIFIER
MODEL NO. A-7300
SHEET NO.
TEAC CORPORATION



NOTE
- TAPE SPEED switch in the HIGH position.
- Frequensy Conversion switch shown in the 60 Hz position.

REVISION	DATE	CHANGE NO.
6		
5		
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3		
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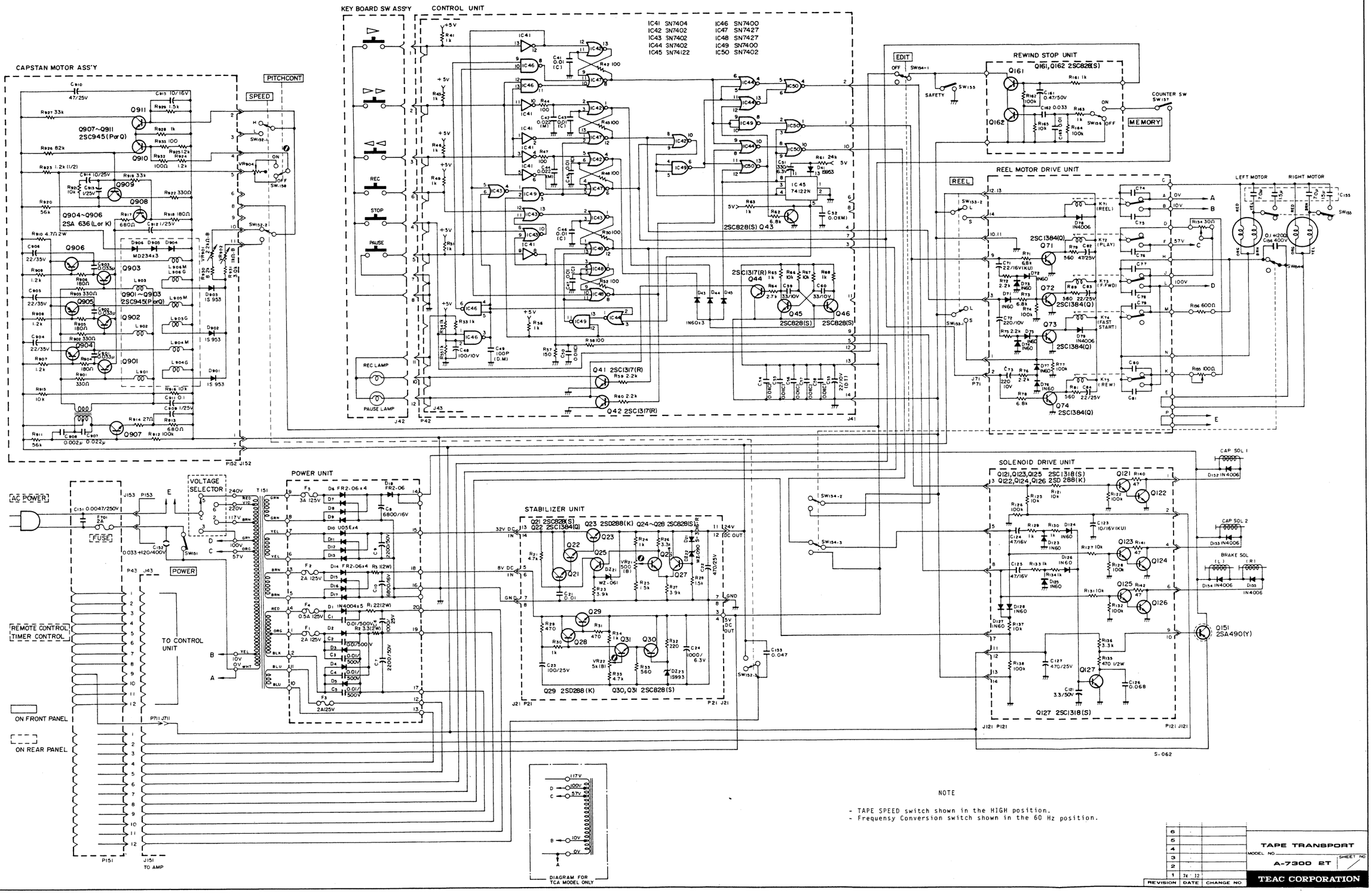
1	74 · 12	

TAPE TRANSPORT
MODEL NO. A-7300 4T
SHEET NO.
TEAC CORPORATION



NOTE

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REVISION	DATE	CHANGE NO
6		
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1	74 · 12	

TAPE TRANSPORT

MODEL NO. A-7300 2T

SHEET NO.

TEAC CORPORATION

TIMING SEQUENCE CHART